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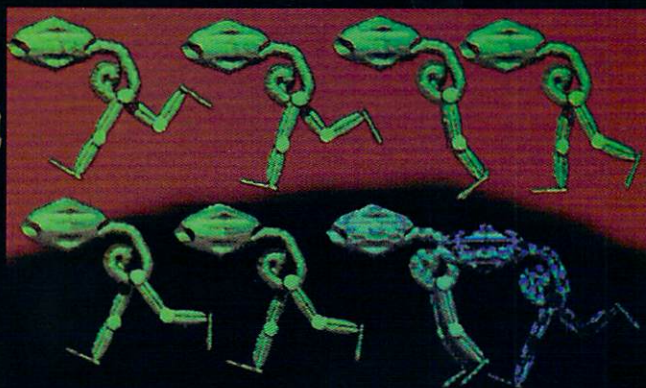
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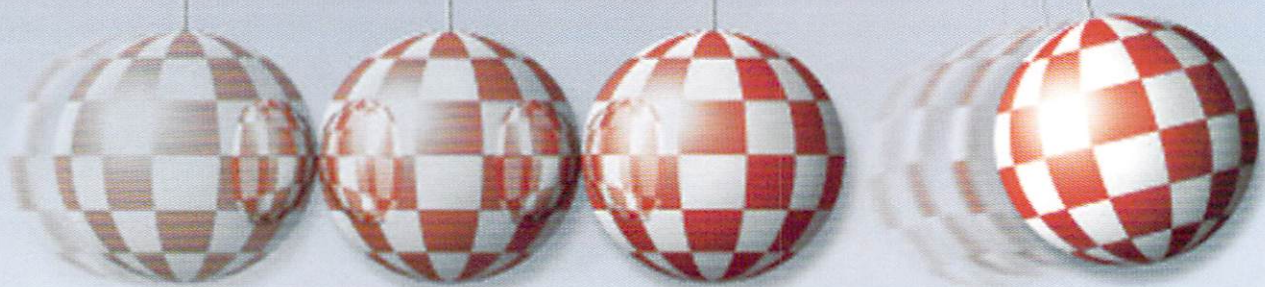
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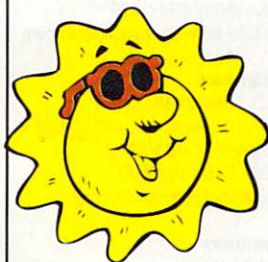


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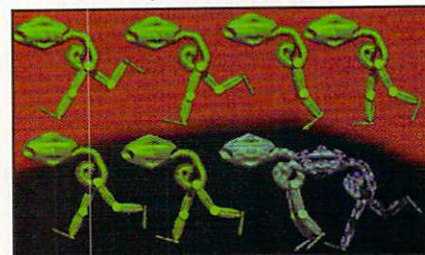
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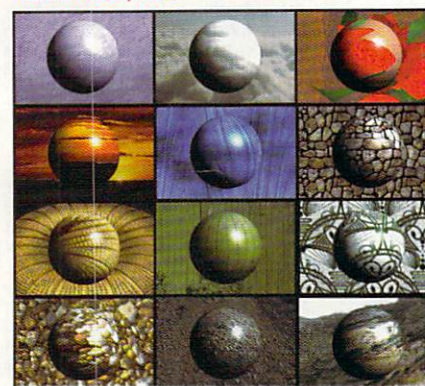
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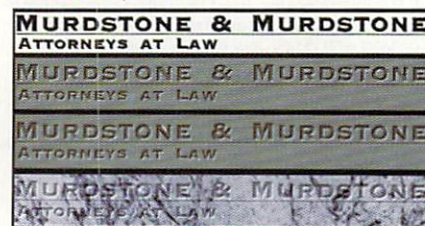
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CD-ROM 6, P.19



Engrave Text for DTP, P.22



This Old Workbench, P.26

9 New Products

& other neat stuff

Compuquick has a new A1200 special, don't miss AmigaFest98 in Australia, Genesis Alpha, New Boing Mat, Siamese price cuts, A4000 shortage continues, two European Amiga mags halt production, and more!

12 Translate AVIs to Anims

by R. Shamms Mortier

AVI, QuickTime and more are not just alternative platform formats, they are also great resources. MainActor from Main Concepts offers Amiga artists an acceptable route to produce and build projects with Amigas, PCs and, eventually, Macs.

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Cutting Torch Animation Project

by Dave Matthews

Part 3: Surfacing the torch head.

19 LightROM#6

from Graphic Detail Inc.

by R. Shamms Mortier

This four CD-ROM collection will please LightWave users on all platforms.

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by Nick Cook

How to create an engraved effect with type.

26 This Old Workbench: Episode 22

Go for Launch

by Dave Matthews

Your Amiga can cut through the jargon and launch your programs through a number of different methods. This month we will study Stefan Becker's ToolManager.

30 On Line

by Rob Hays

New JavaScript tricks, and update information.

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48 Amiga Atlanta Inc. and the IRS

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Pyromania effects add hot looks to your images.



42 Wingnuts

by Jake Frederick

Is it a great challenge or another name for frustration in the air?

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FEEDBACK

New Masthead Offerings

Dear AC:

I just read the letter from Len Carsner in the September 1998 issue, as well as your response, and came up with a new masthead. I've attached it in an LHA archive as an Adobe Illustrator file.

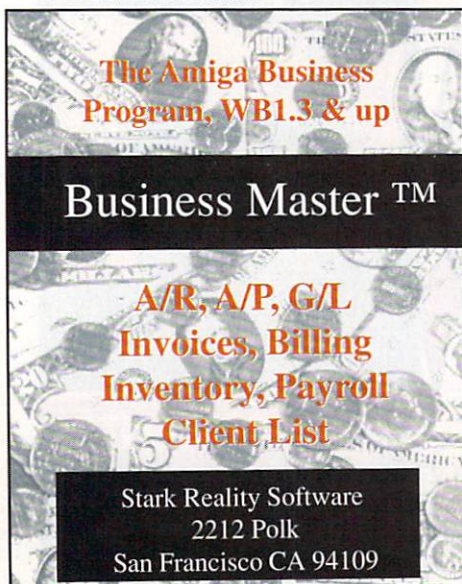
It consists of the name Amazing Computing across the top, an open space in the lower left of the masthead for the placement of issue and pricing information. The rest of the second line is taken by the text "Your Original Monthly Resource for the Amiga", with the "Amiga" being the Amiga International, Inc. Logo (with registered symbol), and the rest of the line being laid over a slanted, filled box. The dimensions as laid out in PageStream3 were 7.25 inches by 1 inch, approximately the same as the current masthead although a bit more compact vertically.

Amazing Computing
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I know that you will get a bunch of proposals, but I'm hoping that mine will fit the bill better than the rest.

William F. Maddock
<http://www.icon-stl.net/~wmaddock>
wmaddock@icon-stl.net
St. Louis, Missouri, USA
Team AMIGA

Thanks for the idea. Your logo looks surprising like our older issues. Let's open this up to everyone. Anyone with ideas can either mail them to the magazine (the address is at the end of this column) or email them to me at: DonHicks@aol.com



Circle 126 on Reader Service card.

Dear AC,

You placed a column asking Amiga users who are on-line to drop you a line about it, so basically, I am! I am using an Amiga for access, an A1200 in a MicroniK infinitiv tower, using Miami TCP/IP, YAM for e-mail: IBrowse for the web, and a 14.4 USRobotics Sportster I picked up second-hand from a local BBS.

I got into Amigas less than a year ago, having read some web pages and basically wanting a "backup" internet machine for my Windows box. Well, like many established Amiga users already know, the Amiga OS outperforms windows in a lot of areas, so basically I got bitten by the bug, and the Amiga became my preference. This is the third machine I've bought, and working on my fourth, two of them I'm planning for gifts to family members. One of the first resources I was referred to for info was *Amazing Computing/Amiga*, and it has proved invaluable. Although, I've been so busy buying up hardware, I haven't gotten around to subscribing yet (I pick mine up off the shelf at the local Barnes & Noble). But that will change after the next payday. :)

Keep up the good work, and thanks for putting out a fine mag. I'm glad to let you guys know that though Amiga users accessing the net using their Amigas are few, I'm proud to be among them. I've never really been the type to get passionate about much, least of all a computer. But such has been the case with my Amiga, though it's not the leading machine in the market. Of course, judging from the mag pages and what I've seen on-line, it is nice to know I'm far from alone in this.

Of course I'm sure you and your staff know all about how once you use one, nothing else seems to compare. I have to admit it does seem odd to be "fanatical" about a computer platform, but the longer I use it, the more unavoidable it seems. Now, if only I could get a bumper sticker for the car from someone, and paint the boing pattern on the doors—well, maybe I'll just stick with a bumper sticker—for now. :)

Sincerely,
John Manager II
jtman@idir.net

Please Write to:
FeedBack
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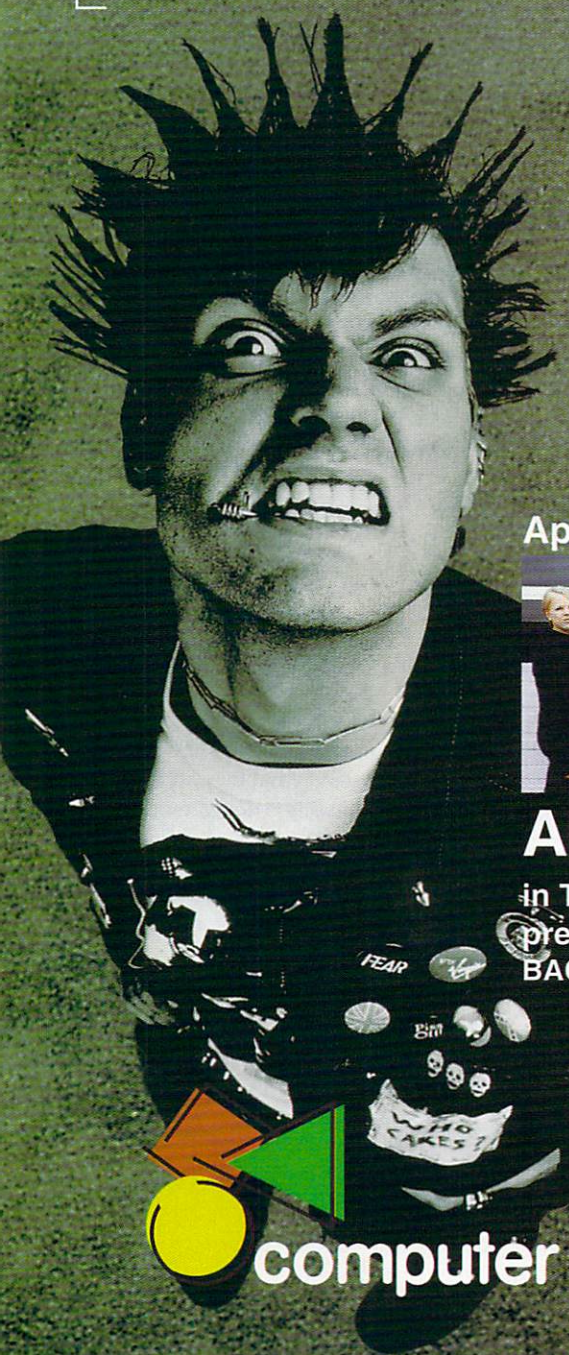
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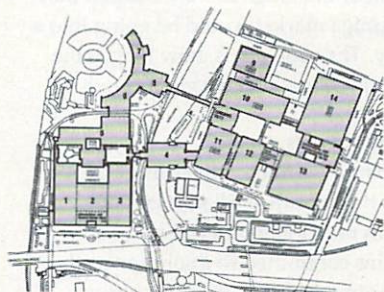
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Looking for Good in all the right places.

The A4000 shortage, magazines forced to close and limited information on the new Amiga—there is no doubt that the news in the Amiga market has been traumatic. But, we were warned. In March, Jeff Schindler of Amiga Inc. announced that the Amiga market would be going into a valley. The problem is, how long is the valley and how will we get through it?

A4000 Towers

The continued A4000 Shortage (no news this month as all participants remain under gag order). Everyone remains committed to a solution as they try to straighten out the difficulties between QuikPak and the ESCOM trustees. Hopefully, I will be able to provide better news next issue.

Good bye CU Amiga

The announcement in mid August that CU Amiga would close, hit everyone by surprise. Including, apparently, the staff. Tony Horgan, CU Amiga's Editor, posted a notice and a FAQ (Frequently Asked Questions) on the CU site.

"It is with great regret that I have to inform you that the October 1998 issue of CU Amiga will be the last ever published. CU Amiga Magazine recently dipped into a state of unprofitability, from which it looked unlikely to emerge. The decision to close the magazine was taken by EMAP in light of the magazine's overall financial performance and the lack of prospects for any immediate or short term recovery."

We will all be sorry to see CU Amiga close. After reading through the CU FAQ, I can see their current profitability was just not good enough to maintain their magazine and they did not want to lower its value to remain in production.

AmigaNews

Almost at the same moment, Bruce Lepper, the publisher of AmigaNews in France, announced that he would also be forced to quit. Bruce's position was

slightly different than AmigaNews. He was not the world's largest Amiga magazine, he was just the big Amiga magazine of France. He was not trying to keep a large staff employed, he was doing the work all by himself. After a year of this and with little relief or improvement coming soon, AmigaNews had to make the decision to stop production.

There are bright spots!

Not everything in the Amiga is down. Some companies and organizations have good news. Even as this issue was going to press, I received the following three releases.

ImageFX 3.2 Upgrade!

Nova Design has announced a version 3.2 upgrade to ImageFX! According to company execs, this release has eliminated virtually all previous problems while adding new features such as more support for BMP, JPEG image file subformats, and images saved from Brilliance! They have also included new ARexx commands and ImageFX now supports pressure in the airbrush painting tool of pressure sensitive tablets.

Amiga First Aid

Paxtron has announced an Amiga Survival Kit or what they have coined, First Aid for your Amiga. With Amiga service centers and repair parts becoming harder to find, Paxtron has created survival kits for C64, A500, A2000, A3000 and A4000. These kits contain popular replacement chips. Paxtron claims that each kit corrects 90% of all Amiga failures, which includes up to 28 symptoms. Replacement chips are, for the most part, "plug-in" and come with full instructions, "allowing any end user with a screwdriver to get their computer up and running in most cases."

Midwest Amiga Expo

Probably the most telling success in the current Amiga market is Amicon's

1998 Midwest Amiga Expo (October 2-4). This year it will be at the Columbus, Ohio Hyatt with seminars and an expanded exhibition floor. With the increase to 8,500 square feet, Amicon's Dave Pearce has said that the show floor is almost triple the size of last year. That is a good sign and an excellent opportunity for Amiga users to get together.

Conclusions

We are in a valley. There will be some smooth areas and some difficult ones. Our major problem is that we do not know how long some parts of this will be and what is waiting for us on the other side. This is why some users have adopted a wait and see attitude. However, that attitude creates the quiet in the market that eventually closes the dealers' and the developers' doors.

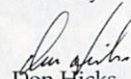
I believe Amiga Inc. is working on a new system that will be a new step for Amiga technology. I also believe that the new land, just beyond the valley, will look a lot different than the one we knew before. This is not a bad thing. We knew change was inevitable and we knew there would be some losses on the way.

The problem for most users and developers today is not where they will be with their old Amiga system, but what they can be with the new one. What peripherals and other products will be needed to make the newly designed Amiga functional. This is why the news from Amiga Inc. is constantly needed. If we know the terrain, we can prepare for it.

For their part, Amiga Inc. has stated that they have a variety of programs in the works, but, due to the interconnectivity of all these programs, they cannot release any news just yet. While I understand what they are saying, I also know what this is doing to other companies.

Let's hope for more and prepare for the best. I hope more companies follow the lead of Paxtron and Nova Design and, from the announcements by Amicon, it looks as if some have. There are opportunities even in valleys.

Sincerely,



Don Hicks
Managing Editor

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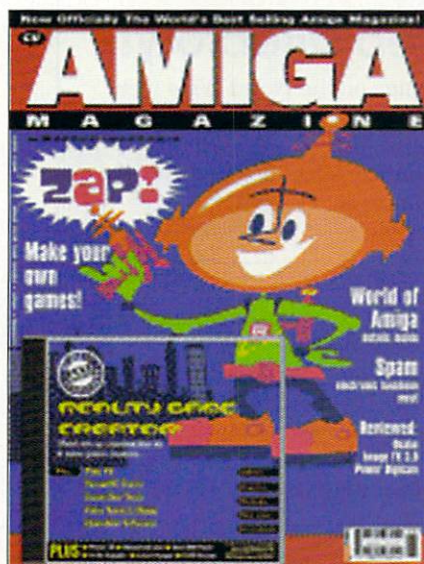
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CU Amiga and Amiga News Halt Production

In a stunning set of announcements just days apart, the leading Amiga magazine in England, CU Amiga and the leading Amiga magazine of France, AmigaNews, announced that they were halting further production. Both companies cited declining sales and increased unprofitability as the cause.

CU Amiga stated they were not interested in selling the magazine to another publisher or decreasing the print quality. They opted to just cease production and return subscribers money if asked.

AmigaNews Editor & Chief, Bruce Lepper, stated, "What is hardest is that I



Production has stopped on two major publications in Europe, CU Amiga (left) from England and Amiga News (right) from France.

lost all my staff. I had to do it all myself. I loved doing it, but as soon as you stopped one magazine, you had to start the next. Despite that it is work I love doing, the financial requirements caused us to recalculate and we had to make the difficult decision."

AmigaFest 98

AmigaFest 98 expo will be held in Melbourne Australia on the 24th and 25th of October this year at Albert Park. Show sponsors expect an attendance of over 2000 Amiga users over the two days. "We know AmigaFest 98 will be a great event."

This grass roots effort by *Australian Amiga Gazette* has asked for support from the Amiga community in three ways. You can be a level one Show

Supporter by placing the official show banner (40x400) in a prominent place on your main web page. This can be done by adding the html tag, "http://www.acay.com.au/~aag/images/expobanner.gif" "alt="AmigaFest 98" width="400" height="40">". In return they will display your banner on their Show Supporters Page (unavailable at press time). Your involvement will also be acknowledged to Amiga users through their show mailing list.

Level two support is by providing "promotional stuff". They are in need of Amiga promotional material for the show: posters, badges, balloons, pens, magazines etc. In return, your company will be recognized for providing the items on the AmigaFest98 web site as well as on the day of the show.

A lever three "Show Sponsor" is a company or organization that has provided an Amiga hardware/software product valued at around \$300 Aust.

The press releases and news announcements in New Products are from Amiga vendors and others. While Amazing Computing maintains the right to edit these articles, the statements, etc. made in these reports are those of the vendors and not Amazing Computing.



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dollars. Your company will receive recognition in their magazine and internet advertising as well as during the prize drawings. A lever four "Major Sponsor" needs to provide a grand prize with a value exceeding \$2000 Aust. dollars which will be drawn on the final day of the show. As a "Major Sponsor",

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Amigafest 98, Tony Cash, c/o Australian Amiga Gazette, 42 Manning Street, Kingswood, NSW 2747, Ph: ++61 (0) 24736-8055 Fax: ++61(0) 24736-8055, Email: aag@acay.com.au, Web: www.acay.com.au/~aag.



Amiga International announced a new Boing-shaped Mouse pad, but you must order it through your favorite Amiga dealer—not Amiga International.

Genesis Alpha by Randomize

Randomize of Toronto has produced a new Amiga graphics system, Genesis Alpha. Giving you what you always wanted in an Amiga: speed, True Color Graphics and PC Monitor compatibility just to name a few!

The Genesis Alpha system features: AmigaOS 3.1 with preemptive multitasking, Motorola 68060 50 Mhz, 32 MB RAM optionally expandable to 128 MB, 24-bit Retargetable 2MB Graphics Board provides 800x600 in 24-Bit, 4.3 GB IDE harddisk, 32x IDE CD-Rom, High Density Floppy Disk Drive - PC format

and Mac (with Optional CrossMac) compatible, compatible with any Standard PC-type Multisync Monitor, Windows95 Keyboard Compatible - 104 Windows95 Keyboard Included, AGA Graphics System included on board, Video and Genlock capable, and 4-Channel 8 Bit DMA Stereo Sound standard. Video interfaces include a 1 x 23 pin video RGB (monitor) output from AGA Chipset, a 1 x 15 pin video RGB (monitor) output from 24-Bit Graphics Board, a video composite (TV, video recorder), as well as an RF modulator (TV antenna). Genesis also includes a full version of Personal Paint 7.1 CD. System Price - \$2549.95 CDN, \$1759.95 US. Optional Fast SCSI Controller - Add to System Price \$134.95 CDN, \$94.95 US. PPC 603e 240Mhz and Pre-Installed Mac Emulation available as options. For more information, visit their website at <http://www.randomize.com/genalpha.html>.

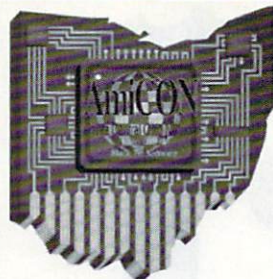
Genesis is a division of Randomize, Inc., R.R. #2 Tottenham, Ontario Canada L0G 1W0, Orders: 1 888 RANDOMIZE (1 888 726-3664), Technical: (905) 939-8371, Fax: (905) 939-8745, Sales e-mail: sales@randomize.com, Support e-mail: support@randomize.com.

FWD Computing, New Amiga Mail Order

Having sold at Midwest and East Coast computer shows since 1986, FWD Computing has announced they are now going to become an active Amiga mail order house. "During the last year we became active in the North American Amiga computer shows, attending all but the Toronto show. We have seen there is a market for software for the Amiga and Amiga clones. We are working to become one of the largest and full service Amiga CD ROM retailers in North America. We also offer a small (but good) selection of Amiga disk based software." FWD reports, "We will still be busy at many computer shows."

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Siamese Price Reductions & Patch

This message was received recently from Stephen Jones of Siamese Systems:

"Following the events that have been going on, and the changing fortunes of the Amiga market, I wish to reaffirm my company's support for the Amiga platform for as long as we are able. Things are very difficult obviously and the news about CU Amiga is very

bad, as both it and Amiga Format have been very supportive of this company in the UK.

"As you may be aware we are working with Access Innovations to bring the New SiamesePCI Amiga card, or Siamese v4 to the market. Once this product is ready I believe it can rejuvenate the Amiga market into a good niche and take the Amiga OS places it has never been, i.e. into PCs and Alphas. I hope that the Amiga community will not fragment and instead keep in touch via the many great web sites including ours :-) and register their interest in continuing to support the companies that are left in the market place. Please understand, no dealers, no Amiga. Likewise, no Amiga customers and no dealers.

"We have also decided to drop the price of Siamese v2.5 to 69.95£ so that when the new Ariadne card hits the streets very shortly, then our software will be cheaper to save you money to go towards the Ethernet card. Also all Siamese software owners will get a discount from their future upgrade to the Siamese PCI card and processor.

New prices :-

Siamese v2.1	Serial	29.95£	\$49.95
Siamese v2.5	TCP/IP	69.95£	\$120.00 approx.
Siamese v4	PCI Amiga	399.00£	\$499.00
(excludes 040/060).			

"As some of you may be aware, we are supporting the Alpha processor and we have some very good prices on what is the fastest chip on the planet. The new 21264 looks set to rock the world at last, and the multiple processor boards, as well!! Please see our web site at www.siamese.co.uk."

Due to a problem with some early versions of the Siamese Remote Amiga v2.1 software, a patch has been released. The patch seems to have cured the connection problem experienced on some modern PC serial ports and the file is now on the www.siamese.co.uk web site for downloading. Please go to the support section for the Amiga Siamese products and follow the instructions.

Siamese Systems, Gable End, 2 The Square, Hockliffe, Bedfordshire, LU7 9NB.
Tel: 01525 211558. Fax 01525 211558.



Translating AVIs to ANIMs

AVI, QuickTime and more are not just alternative platform formats, they are also great resources. MainActor from Main Concepts offers Amiga artists an acceptable route to produce and build projects with Amigas, PCs and, eventually, Macs.

by R. Shamms Mortier

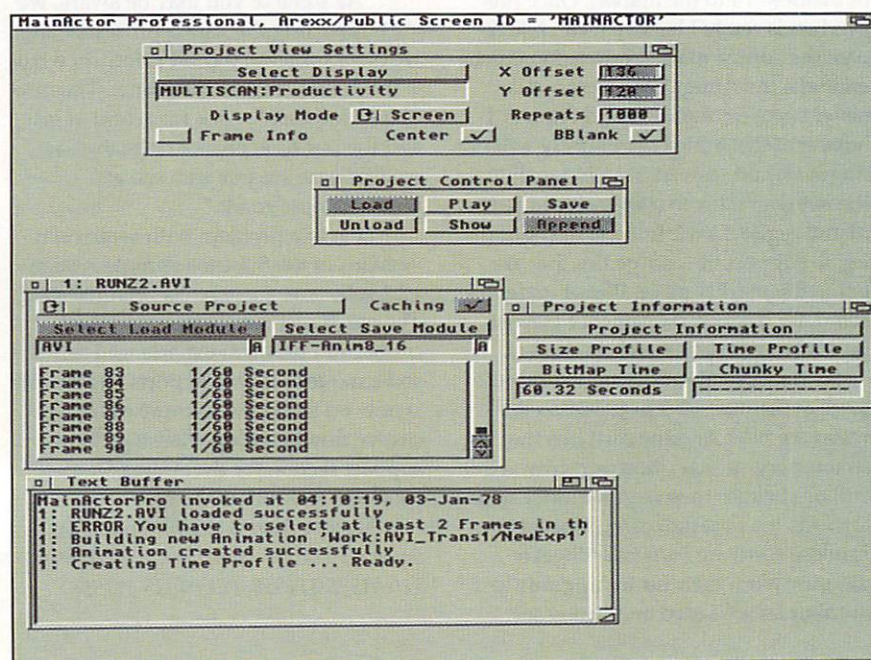


Figure 1. The Amiga version of the MainActor Broadcast interface.

In past issues of *Amazing Computing/Amiga*, we have looked long and hard at the topic of cross-platform compatibility. The feedback on our decision to do so has run about 30:1 in favor of doing some reporting based on it. Most of us realize that Bill Gates, no matter how many pies are aimed at him, is not going to go away. Microsoft, and the software that it releases to the marketplace, will remain a central part of the computer graphics and animation enterprise for a long time to come, maybe till the cosmic cows come home. That being said, it does not mean that we have to move all of our creative Amiga energies over to the PC. What we do have to do is to find ways to take what we need from the PC technology and platform, and use it as a resource for Amiga graphics and animation.

QuickTime and AVI

One of the utilities that has been sadly lacking on the Amiga up to now is a piece of software that offers the Amiga artist and animator a chance to automatically convert QuickTime animations to the Amiga. Why QuickTime, the Apple animation standard? Well, QuickTime is fast becoming the format of choice for Mac and Windows systems, and, if as planned the new MPEG 4 standard uses a QuickTime parameter, QuickTime will quickly supersede all other animation formats in the years to come. QuickTime 3 is soon to be released for both the Mac and Windows systems. But more about QuickTime later.

On PCs, however, QuickTime has yet to replace the embedded animation standard, AVI (Audio Visual Interleave). There is a battle to make AVI animations a thing of the past, but if QuickTime takes the eventual prize, AVI formatted animations will take a long time to give up the ghost. AVI animations will probably last at least another ten years as the real PC (Windows) standard.

There is a reason no utility exists that will translate QuickTime animations into Amiga compatible animation formats. The reason is money. You see, Apple requires a fee from any software developer who accesses the QuickTime format. For instance, if Nova Design wanted to fold in the QuickTime format in its spectacular ImageFX software, they would have to pay Apple for each ImageFX package sold.

Most software developers (especially on the Amiga) operate very close to the margin, and do not appreciate being charged to do something simple like access a graphics or animation format. Just look at all of the trouble caused by the GIF format, for instance. Compuserve wanted a fee from every developer who accessed the GIF format in their software, because they failed to get a proper license agreement for its use from GIF's creator, Unisys. The result of this was that the PNG ("Ping") format was created by a separate

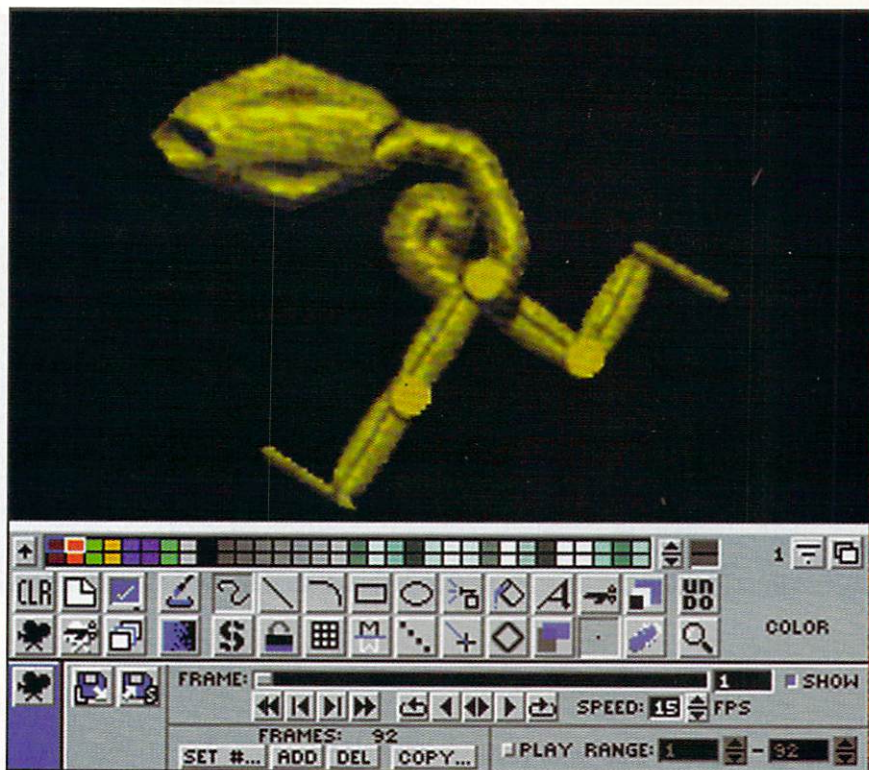


Figure 2.

Once translated in Main Actor, the animation can be displayed and previewed in Amiga programs like Brilliance (shown) or DPaint. The figure shown was created in the Terrain Object Editor in Bryce 3D on a PC, and rendered as a walking object. The animation was then ported to the Amiga for processing and recording.

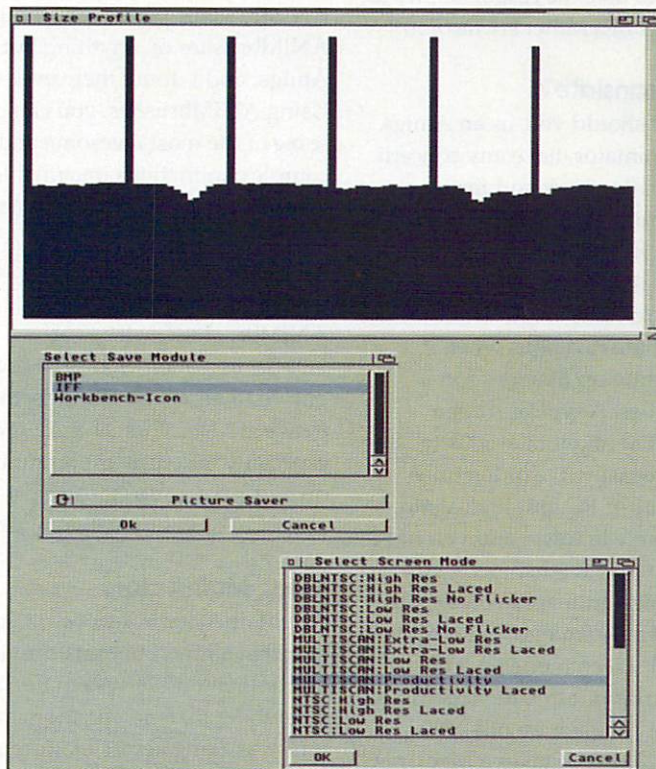


Figure 3.

Main Actor allows you to access a variety of data about the imported file before you translate it to another format. Shown top to bottom: a "Size Profile" of the animation, displaying the keyframes as larger spikes; a "Picture Saver" option, with IFF single frames selected; the Screen Mode requester.

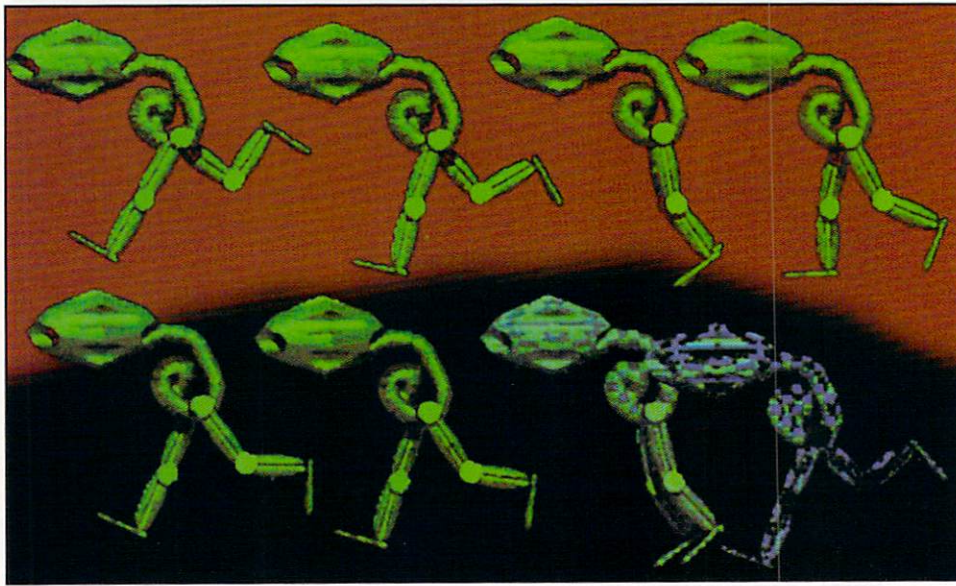


Figure 4.
When picked up as an Amiga ANIMbrush, the original PC animation can be used as a paintbrush.

Internet development consortium as a GIF substitute, and no fee was or will ever be charged to use PNG. That's the reason that even Nova Design didn't address the GIF format directly, but allows you to take the responsibility to translate to it in a rather sly fashion.

But Why Translate?

So why should you, as an Amiga artist and animator, have any concern about translating back and forth between Amiga ANIM formats and PC AVI or QuickTime formats? Simple. The answer is survival. The AVI and QuickTime formats are far from perfect, and are ravenous when it comes to eating up memory for animation files. A typical Amiga animation that might take 500k to store weighs in at easily five or ten times that on a Mac or PC. But then again, that's the game in town, and you have to be able to play it when necessary.

An Amiga animation, on the other hand, is not only smaller, but it runs at 30fps in full screen mode (in 8 bits), ready to record out to videotape. This is true if the Amiga is an old 2000 running at 25Mhz. It takes a Mac or PC running at 200Mhz with a 24-bit card to match it. Remember that the Amiga was built as a video platform from the ground up. So, it would make sense to

translate an AVI or QuickTime animation into an Amiga compatible ANIM format, saving lots of hard disk space in the process, and running the animation on a real video machine.

There's also the issue of ANIMbrushes. There is nothing like ANIMbrushes on anything but the Amiga, and I doubt there ever will be. Using ANIMbrushes, you can create some of the most awesome and complex animations imaginable. Wouldn't it be nice to port an animation generated on a PC as an AVI file over to the Amiga, and then pick up parts of it to store and use as ANIMbrushes?

So, it is often vital to be able to port animations back and forth between Macs, PCs, and Amigas. This especially becomes important if you own or have access to Amigas, Macs, and PCs for your creative work.

Enter, MainActor

MainActor is a software application that allows the transformation of one animation file system into another, something that all animators long for when working across platforms (and most do). MainActor was developed by Main Concept in Germany for the Amiga. The Amiga version is still available, and it is at revision 1.4. Like

so many Amiga companies however, Main Concept has also branched out into other platforms. In this case, that's better news for Amiga users than it first appears, because it has allowed MainActor to be an even more valuable cross-platform resource all around. At last, an Amiga animator can export Amiga animations to other systems, and also import animations from other systems to the Amiga for recording or other uses.

There is a broadcast and a shareware version, with the broadcast version being obviously the more full featured release. The Amiga version does not support QuickTime animations, but a PC version does. A pure Mac version is in the works, so Mac QuickTime animations will also soon be available for porting to the Amiga. How? Well, the Amiga version does support the AVI format, so by using either the PC or Mac version to translate an animation to an AVI movie, you have what you need for Amiga purposes. This opens up a much wider creative arena for the Amiga animator, and even helps to keep the Amiga viable as a creative animation platform while Amiga Inc. develops the next level Amiga.

One of the features that I appreciate best about MainActor is an option

not offered as directly (that I am aware of) by any other translation software. This is the capability to break an animation up into single frame sequences by choosing a clear menu item.

At the moment, MainActor allows you to select either IFF or BMP files as the single frame format. You can even select one frame in a sequence, and transform it into a Workbench icon. One drawback is that the AVI movie you import has to be a 256-color animation, but that's because an un-enhanced Amiga 1200 or 4000 has a 256 color boundary. Of course there's always HAM animations, but they tend to be very quirky, and often display shakes and shudders during playback. Main Actor also allows you to import FLI and FLC animations, translating them into Amiga digestible formats as well.

BMP: RunLength Encoded, Uncompressed; DL: Type 1 and Type 2; FLI / FLC: ByteRun, Byte Line Coding, Clear Screen, Uncompressed, Word Line Coding; GIF: LZW, GIF Animation LZW; IFF Anim 3 / 5 / 7 / 8 / J: ByteRun, Delta 3 / 5 / 7 / 8 / J; IFF Picture, ByteRun; JPEG Picture: (supports pictures with missing Huffman tables); MPEG Audio: Layer I / II / III; MPEG Animation: MPEG I & II, Supports Audio; PCX Picture: RunLength Encoded; PNG / PPM / PGM / PBM; QuickTime Animation (hooray!): Sound, Apple Animation, Apple Graphics, Cinepak, Intel Indeo v2.1 / 3.1 / v3.2, Motion JPEG; TGA Picture: RunLength Encoded, Uncompressed; WAV Sound: Pulse Code Modulation.

MPEG-II PAL, MPEG-II NTSC; PNG: PPM / PGM / PBM; QuickTime Animation (Supports Sound): Cinepak (Windows Only), Intel Indeo v3.1 (OS/2 Only) / v3.2 (Windows Only) / v4.1 (Windows Only); Motion JPEG; TGA Picture: RunLength Encoded, Uncompressed; Video Data Binary (Splits the video data from animations), Video Data; WAV Sound: Pulse Code Modulation.

Note there is no IFF data output, so the Amiga translation has to be done in the Amiga Main Actor version if it is to run on the Amiga.

MainActor Broadcast v1.04 for the Amiga is \$188.00. It is a full featured commercial animation processing package. Featuring over 15 animation

At the moment, MainActor allows you to select either IFF or BMP files as the single frame format. You can even select one frame in a sequence, and transform it into a Workbench icon.

MainActor, PC version

As an Amiga artist and animator with access to a PC, you might want to own MainActor for both the Amiga and your Windows system, in order to make porting animations between your two systems easier. The Windows version contains the following (note the Amiga connection):

Load Formats-

AVI: Cinepak, Intel Indeo v2.1 / v3.1 / v3.2. /, Microsoft RLE, Microsoft Video 1; Motion JPEG: Support of animations generated by video capture hardware (i.e., have missing Huffman tables. This feature has been tested with animations generated by FAST, Matrox and Miro hardware), Ultimotion, Uncompressed;

Output Formats-

AVI Animation: Sound, Cinepak (Windows Only), Intel Indeo v3.1 (OS/2 Only) / v3.2 / v4.1 and v5.0 (Both Windows Only), Microsoft RLE; Motion JPEG: Software; Motion JPEG Hardware; Ultimotion (OS/2 Only), Uncompressed; BMP: Uncompressed; FLC Animation: ByteRun, Word Line Coding; FLI Animation: ByteRun, Byte Line Coding; GIF Picture: LZW; GIF-Anim Animation: LZW; JPEG; MacPICT; MPEG Audio; MPEG Audio Layer II; MPEG Animation: MPEG-I PAL (Supports Audio), MPEG-I NTSC (Supports Audio),

formats, 20 sound formats, effect modules and much more. The MainActor Pro for the Amiga is \$50.00 and it is an enhancement of the original shareware version. The MainActor PC Version is \$60.00 and a PowerMac version is in the works. You can contact Main Concept at the following email addresses:

orders@mainconcept.de
support@mainconcept.de
markusm@mainconcept.de

Please Write to:
R. Shamms Mortier
c/o Amazing Computing
P.O. Box 2140
Fall River, MA 02722-2140

•AC•

Aladdin4D:

Cutting Torch Animation Project Tutorial

Part 3: Surfacing the Torch Head

by Dave Matthews

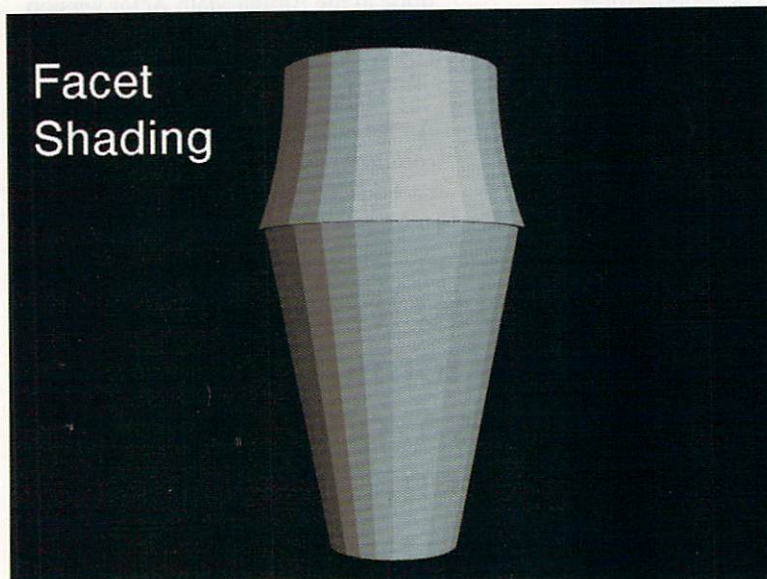


Figure 1: Facet Shading

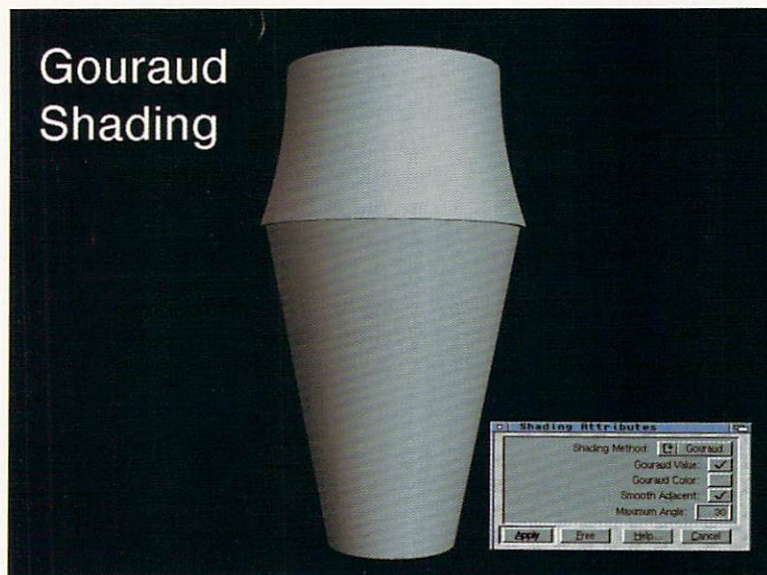


Figure 2: Gouraud Shading

Last issue we modeled the Torch Head. While the model we created could certainly be more elaborate, rather than add detail to the model itself, we will create the illusion of detail using surfacing. There are many aspects to creating a realistic surface for your model. I will concentrate on three main ones in this article; shading, surface attributes, and texturing.

Ninety Degrees in the Shade

Shading, not to be confused with cast shadows, is a technique used by both traditional and computer graphic artists, to create the illusion of 3D space. An object, whether real or a model in the computer looks three dimensional to us because of the way the surface of the object interacts with the illumination.

Aladdin 4D has three basic methods of shading- Facet, Gouraud, and Phong. Facet shading is the fastest to render, as it makes no attempt to blend polygons together. It simply colors each poly a single shade according to how it is illuminated and produces a rather flat look. See Figure 1.

Gouraud shading uses interpolation to adjust the color of a polygon as it meets its neighbor. This produces a very smooth look and also allows for various color effects, but takes longer to render. See Figure 2.

Phong shading is the most realistic of Aladdin's shading techniques, and also the slowest. Phong not only smooths the edges of models, but it also allows for specular highlights. These "hot spots" are important indicators of an object's surface. Smaller, brighter highlights indicate a hard surface, while large, less intense highlights indicate a softer surface. See Figure 3.

Phong Shading

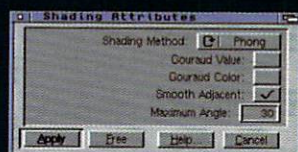


Figure 3: Phong Shading

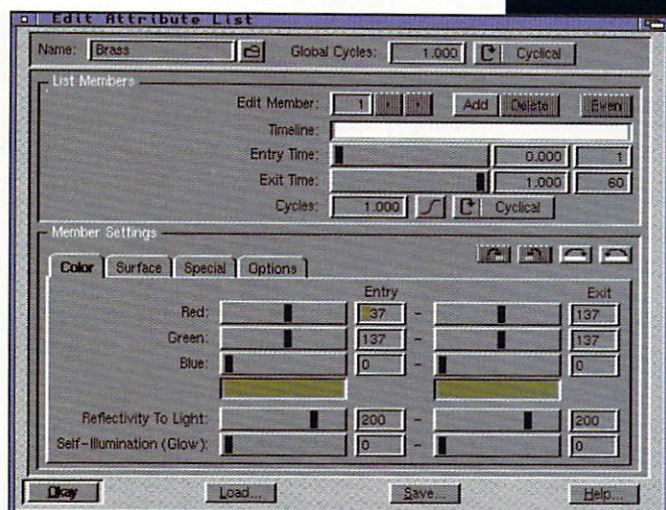


Figure 4: The Color Attributes

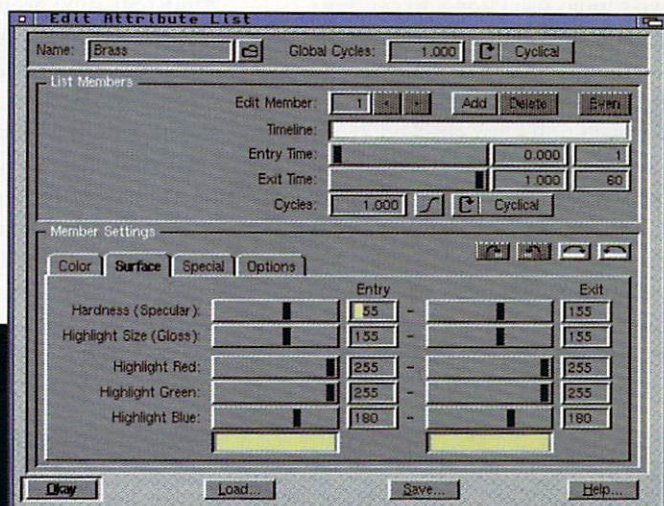


Figure 5: The Surface Attributes

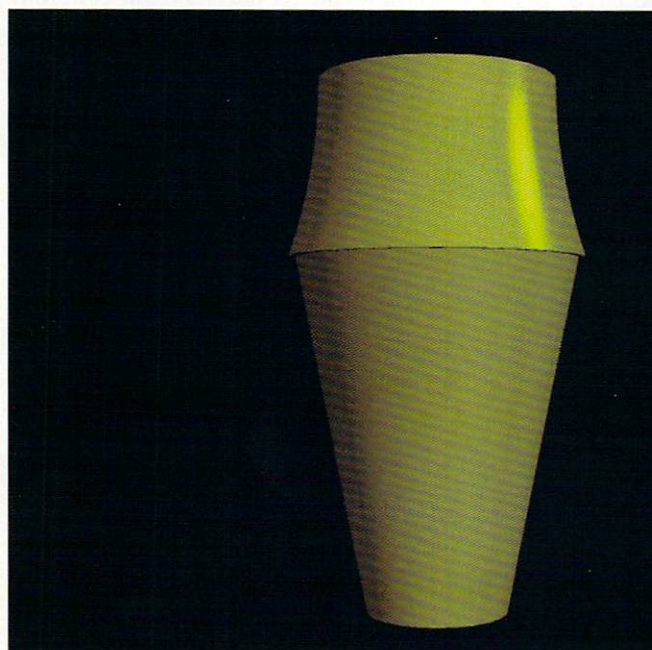


Figure 6: The Torch, After Surfacing

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A Shade of Our Own

We want our cutting torch head to be of a brass-like metal. Knowing this, we should use Phong, to get those metallic highlights. Look at the shading requester in Figure 3. We have the type set to Phong, and the smooth adjacent polys box checked. Normally you want this checked, however in some instances, you want to leave this off. In a complex model, some parts might be smooth and blended together, whereas other parts should have a hard, well defined edge. Remember that you do not need to shade an object all the same, you can

select groups of polygons, and shade them as required. This is where Aladdin's shading groups come in handy. Shading groups are similar but separate from the normal polygon grouping feature in Aladdin. To use these, use Aladdin's multiple Polygon selection tools to select polygons you wish to be shaded a certain way, and select Shading for the object menu.

You might also notice the Maximum angle item at the bottom of the Shade requester. This is only available when the smooth adjacent box is checked, and is used in conjunction with the smooth adjacent feature. The

maximum angle will determine which polygon edges will be smooth. If the angle is larger than the maximum angle specified, the edge will not be smoothed.

On the Surface

Once you have your object shaded, you need to further refine its surface. Aladdin's Attribute requester is where you set the object's color, transparency, shininess, etc. You will use this in conjunction with the Shading and Texture requesters to create the look you are after.

In Figure 4, you can see the first section of the Attribute requester. This section controls the base color of the object, its reflectivity to light, and its self-illumination, if any. Note that reflectivity to light does not refer to mirror like reflections (which Aladdin cannot do), but simply how much light an object either absorbs or reflects. A black velvet pillow will have very low reflectivity, while our brass cutting torch head will be fairly high. When choosing the color for a metallic object, you will usually want to make it dark.

In Figure 5, we see the surface section of the Attribute requester. Here we set the highlight hardness, size and color. For Brass, we want a medium hardness and highlight size. The real trick to making decent metal is the color of the highlight. You want the highlight to be a very light, somewhat over saturated shade of the base color of the metal, in this case yellow. See Figure 6 for the resultant render.

Well, that will have to do for this issue. Next time, we will give our cutting torch the grunge treatment, using ImageFX (other paint programs could be used as well) to create some nifty bitmap textures for Aladdin to use. See you then.

•AC•

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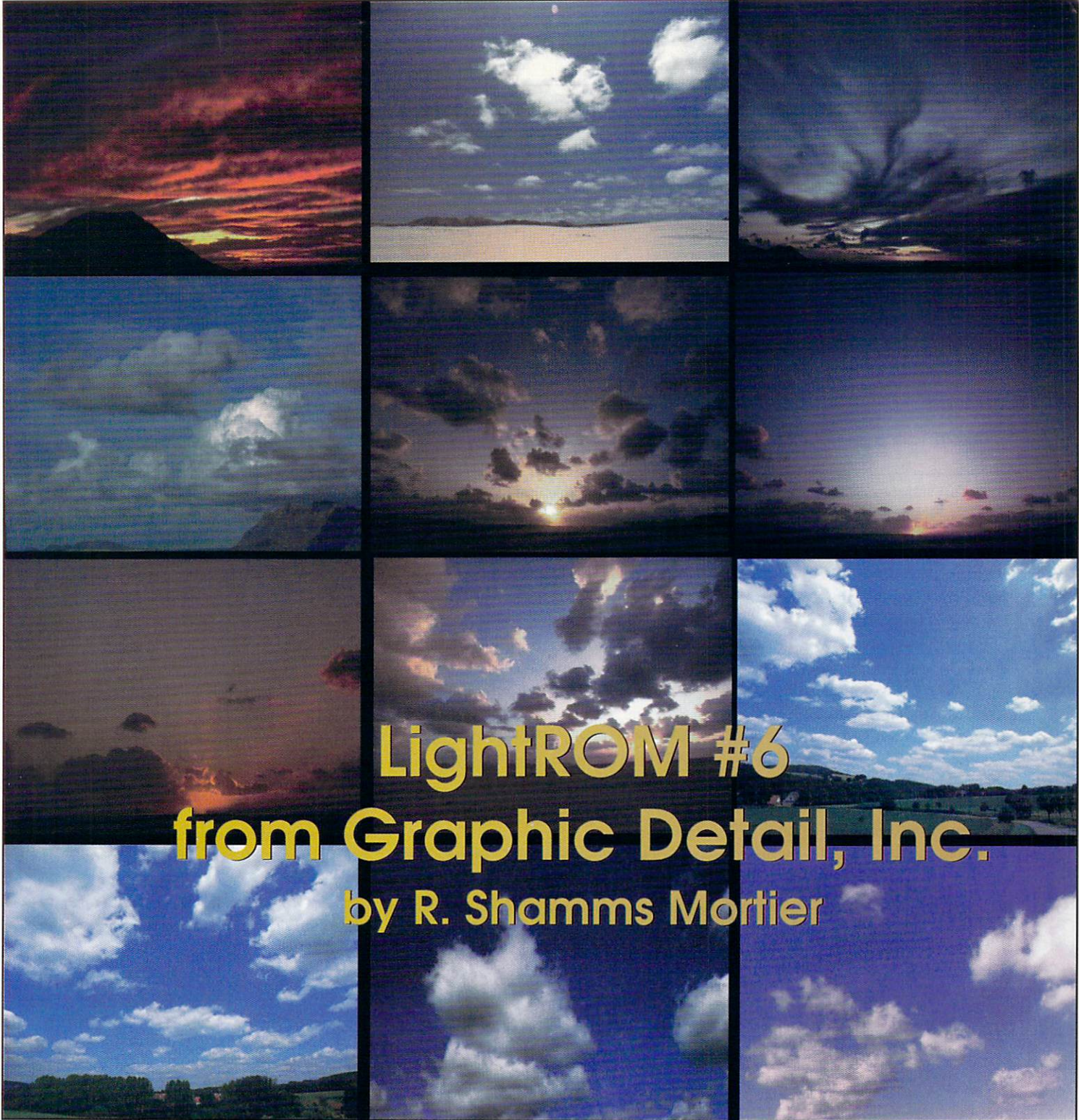
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LightROM #6

from Graphic Detail, Inc.

by R. Shamms Mortier

Figure 1. A selection of beautiful cloud backdrops from the LightROM 6 collection.

Continuing our exploration of great CD-ROM libraries, here's a few words and images that relate to Graphic Detail's LightROM #6, a four CD-ROM collection meant to please LightWave users on all platforms. Remember that Nova Design's Aladdin 4D can read LightWave files as well, so the Amiga is well represented by the material on this CD-ROM.

CD#1:

Here are 105 complete LightWave scenes, with all of the Objects, Envelopes, Surfaces and other files that are needed to render them. The categories include-

Anatomy: Angel, Georgian, Caveman, Hellcats, Noma, Roman, Winged God, and Woman. These are great LightWave models for populating

your scenes with characters.

Animal: Birdcage, DinoDemo, and Pegasus. The DinoDemo will probably be the most popular, as far as gathering ordering info. The Pegasus model is exquisite, whether used for a logo or as part of a mythical animation (from JNC Graphics).

Aviation: B-24, B-26, B-29, F-105,



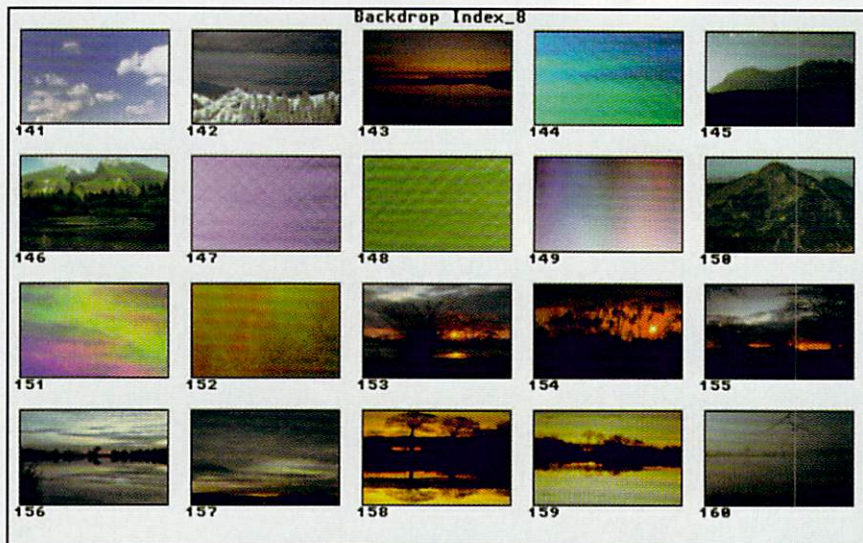


Figure 2. Extensive Index Screens on the LightROM 6 CDs allow you to see what an image looks like before loading it.

Lancaster, Learjet, and an ME-110.

Botany: Leaves and Rose.

Building: Condo, Dam, Dopler, Hallway, Hotel, House 1 & 2, Living, Office, Oproom1, P_Lower, Prison, and R_Bridge.

Computer: (Based on an Amiga 4000) Joystick, Keyboard, Monitor, and Tower.

Furniture: Bedtab, Bureau, Chair, Desk, Mattress, Stairs, Stove, and Table. Populate your houses.

f/x: Shockwave and Explosion. I rendered the Explosion f/x, which

look like an exploding Death Star.

Miscellaneous: Don't think of this folder as throw-away extras. There's lots of great symbolic items here. ATM, Cabltron, BubMorph, Clapboard, Cornucopia, Easter, Granite, Hot Jobs, Leaves, Menorah, Rockhead, Scissors, Simple_m, Stone, Toy Clock, TV, UAW Logo, WVPB, and Y_Phys. All these items are from Destiny Images.

Music: Guitar 1, 2, and 3, and Speakers. Rock on!

Sci-Fi: Alien Ship, Deathbot, Earth,

Flyby, hanger 1 and 2, Robot 2, Spacecorgo, Station 1 to 3, and WW Alien. The Alien Ship looks very nice when rendered, and is easy to fly around a scene. The Space Station is especially worth mentioning, since the modules can be moved around if you want to redesign it.

Showcase: This folder showcases the work of ten great LightWave artists.

Sports: Helmet, Lion Logo, and Soccer.

Vehicles: BMP1, Harley, Mercava, Piston, Tank, and Vehicle 1 to 4.

CD#2: A-Bomb, Dinos, and More

The star feature on this CD-ROM is the A-Bomb sequence by Dean Scott, a world class LightWave artist and animator. The 240-frame sequence is contained in single file format, or, you may choose to load the scene file and render it out yourself. The scene shows an A-bomb explosion in the desert, and it's chillingly real.

The startling Dinosaurs from Gruppo Iride's DinosaurROM CD-ROM are presented in AVI animations and one free Dino model for LightWave. If you are a Dino lover, you won't believe the high quality of these models, and the way that their textures move with the muscles. These models could be good enough for a Jurassic part 3 film. I can't imagine a LightWave user not wanting to have LightROM 6 in their collection, just for these movies alone. I hope to review the DinosaurROM CD in detail sometime in the future in AC.

TV3D from Event Horizon Studios has a demo of their LightWave tutorial series on the CD. This is a demo of a fully interactive tutorial CD for LightWave users. Added to this is an excerpt from the LENY folks, the LightWave group from New York. There's still more. For PC users, a demo of PolyTrans (what Pixel3D is called for the PC), and another demo of the NuGraf rendering system.

CD#3:

Here's a demo of the Vertiletric plugin for LightWave, a lightning and sparks generator (PC version). The Oberland folder is bursting with images, photos, and rendering that can



Figure 3. A selection of LightWave Objects rendered from the LightROM 6 collection.

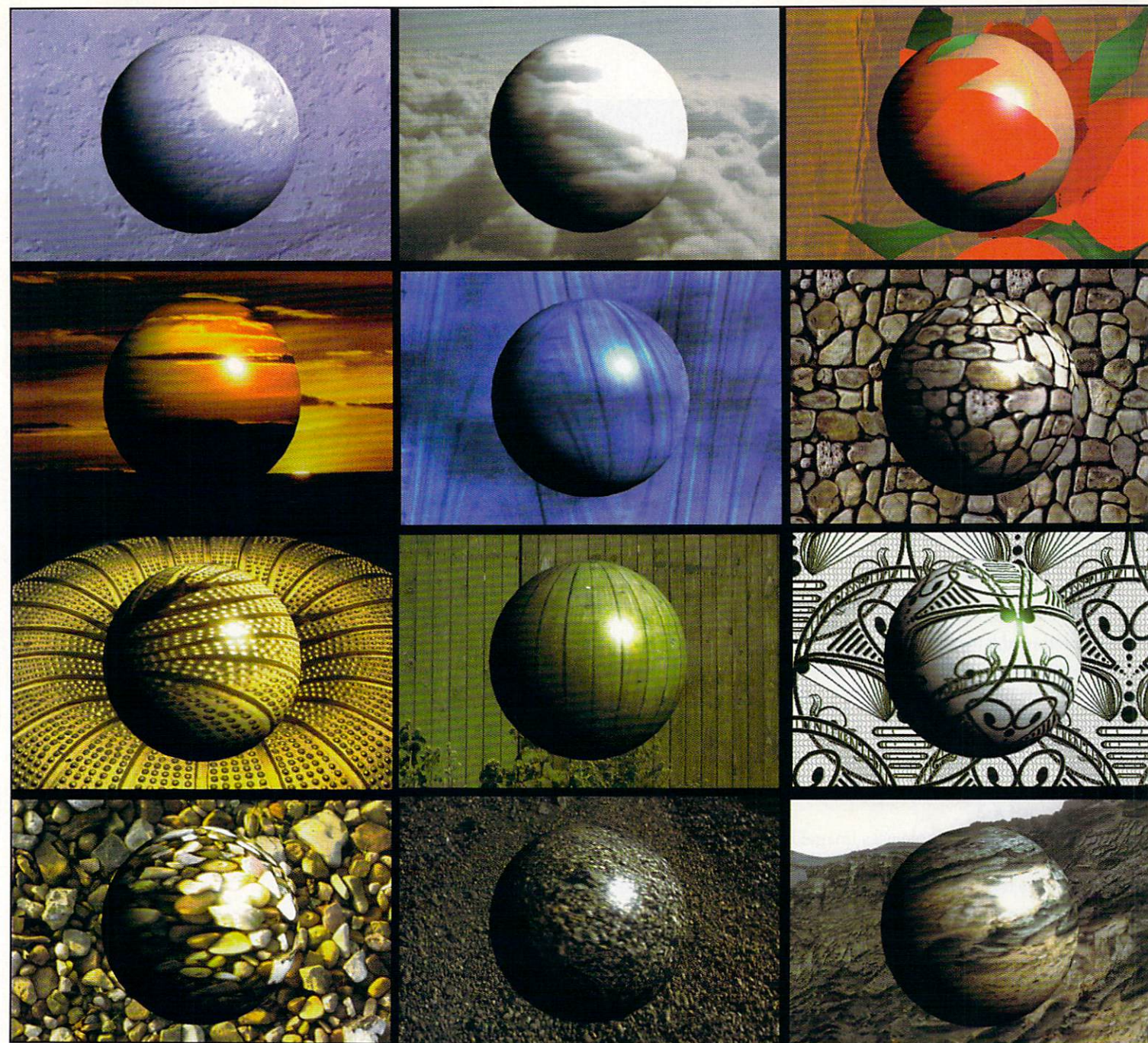


Figure 4. Here, you can see a superimposed sphere that uses the same LightROM 6 texture as that used in the background, to give you some idea how the different textures wrap on a 3D object.

be used as a background in any application on any system that can read JPEG files, though some of the images are also in other formats. My favorite folder is one called Video, which boasts a dozen great sky shots in 512 and 1024 resolutions. A Texture folder contains over 150 images in each of five formats: IFF, JPEG, TIFF, Targa, and BMP. There is also a separate Indexes file. To round off this CD, there's a demo version of World Construction Set for the PC.

CD#4:

The last CD contains almost 600 fully indexed Targa files, seamless rendered images useful as backdrops and texture maps.

Conclusion-

Each LightROM CD gets better and better, and bigger and bigger. The material here for LightWave users dominates, but there's more than enough textures and images, as well as demos for PC users, to justify purchase

by non-LightWave owners. I look forward to reviewing, and being amazed by, LightROM #7.

•AC•

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Etched in Stone

HOW TO CREATE AN ENGRAVED EFFECT WITH TYPE

by Nick Cook

Engraved letters provide a formal and elegant appearance to text. Think of various monuments or the signs at entrances to some grand buildings. We'll duplicate that effect for the printed page.

ImageFX 3

Our first example uses ImageFX 3: STEP ONE: Create a white page. Add the text in black letters. Save this image, since you'll need it later (Figure 1, top).

STEP TWO: Apply the Relief effect (in the Convolve menu). Set the Light

Source to the 4 o'clock position and the Intensity to 256. This will make the light source appear to fall from the upper left.

STEP THREE: We need to darken slightly the interior of the letters. Reload the image you created in Step One as the Swap buffer. Click on the Composite button. Select Add from the Operation popup menu. Set the Blend slider to 20%. Click Okay (Figure 1, middle).

STEP FOUR: You may need to touch up some of the letters at this

point. Draw in any letter edges which may be missing (Figure 2).

STEP FIVE: Apply a light Gaussian Blur to smooth out the text (Figure 1, bottom).

STEP SIX: Load your background image as the Swap buffer. Go to the Composite panel. Select the Add Operation, and move the Blend slider to 100%. Click OK (Figure 3).

Personal Paint 6.4, & Others

Many Amiga paint programs can create engraved text. The following

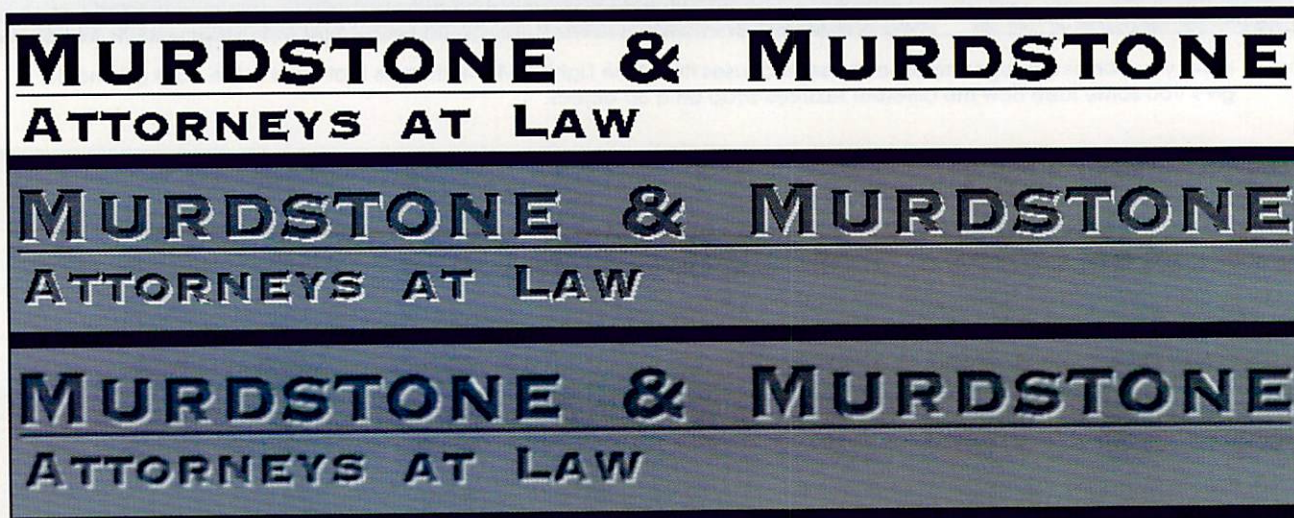


Figure 1: We plundered Dickens' "David Copperfield" for our lawyers' names (top). The darkened centers add to the impression of the letters being recessed (middle). The light Gaussian Blur smooths out the text (bottom).

steps are for Personal Paint 6.4, but they could be easily adopted for a different one or combo (e.g., Deluxe Paint and BME):

STEP ONE: Add the text in black letters. Apply the Emboss High effect (under the Project/Image Processing menu item).

STEP TWO: Switch the highlight (white) and shadow (black) lines. Go to the Color menu and select Palette>Edit. Swap the black and white colors.

STEP THREE: Repair any holes in the letters. You don't want stuff "leaking out" later when you do fills.

STEP FOUR: Load a brush of whatever your background texture is going to be. Click on the Fill icon with the right mouse button. When the Fill panel appears, select Pattern as the type and click on the brush number for your texture brush.

STEP FIVE: Fill the letters with your texture.

STEP SIX: In the Color menu, select Stencil, then Edit. When the requester comes up, shift click on the colors black and white. Click OK.

STEP SEVEN: Run the Darken effect from the Project/Image Processing menu item.

STEP SEVEN: Go back to the Color menu and turn off the stencil.

STEP EIGHT: Fill the background with your texture. Check the article's title to see the results.

Now, thanks to a variety of Amiga programs, your brilliant words can be etched in stone!

•AC•

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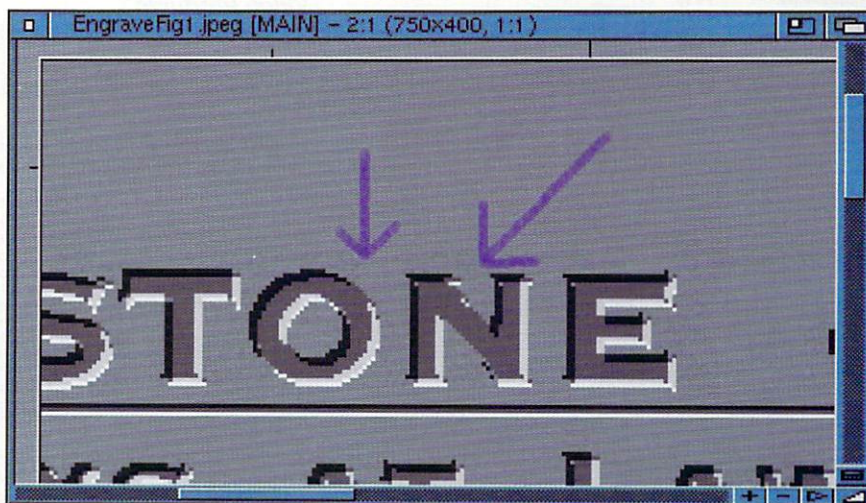


Figure 2: The Relief effect may "break" some letters. Completing the letter edges will make the final image cleaner.

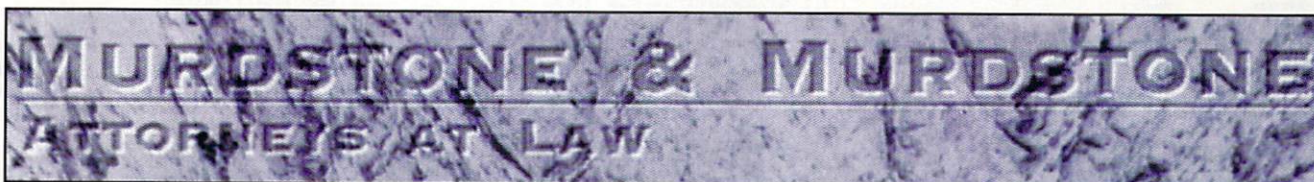


Figure 3: And the lawyers are now officially in business.



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This Old Workbench Episode 22:

Go For Launch!

Your Amiga can cut through the jargon and launch your programs through a number of different methods. This month we will study Stefan Becker's ToolManager.



By Dave Matthews

Your basic unadorned Amiga comes with a number of ways to run applications. You can use the most basic of GUI methods, i.e. double click on an Icon. You can also run programs from the shell by typing their names. However, although effective, these methods can be cumbersome.

If you have many programs on your hard drive, running your applications can seem like an endless series of "click, click, click..." as you burrow your way to the location of the program. And

running programs from the shell can be even more frustrating when you have forgotten the location or name of a program.

There have been many attempts, on many platforms to solve this, from the Next's Docks, to Windows' Start Menu, and a squillion in between. The Amiga has been graced by versions of almost every method of launching programs you can imagine, and that is what I'll be covering in the next several articles.

What's up Dock?

One of the more popular forms of launching programs is through a dock. A dock is, at its most basic, a list of programs. You click on the one you wish to run, and the program runs. Docks can be comprised of programs from anywhere on your hard drive. Once configured correctly, you never have to worry about clicking your way through twelve sub directories, or typing an obscure filename again. Depending on

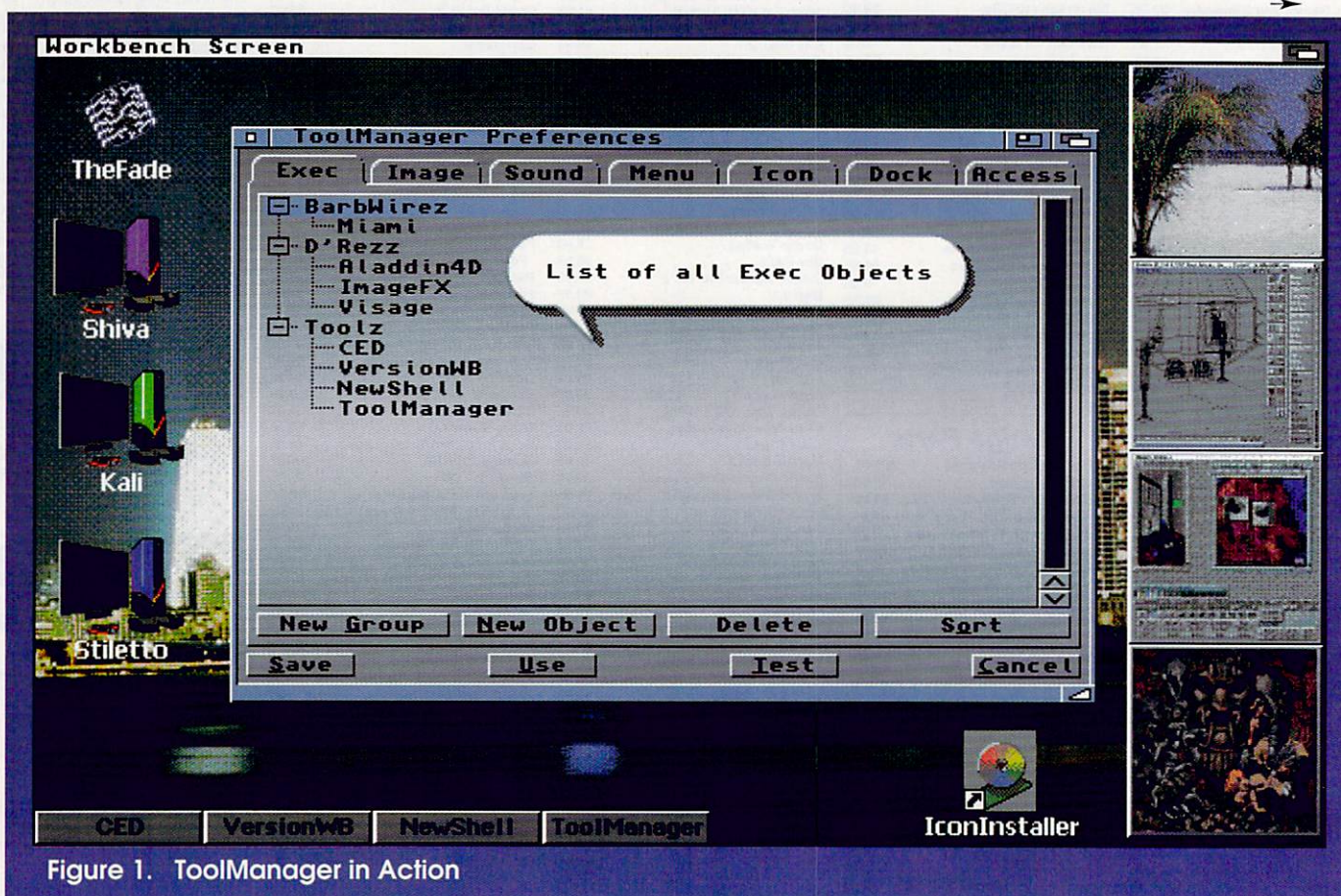


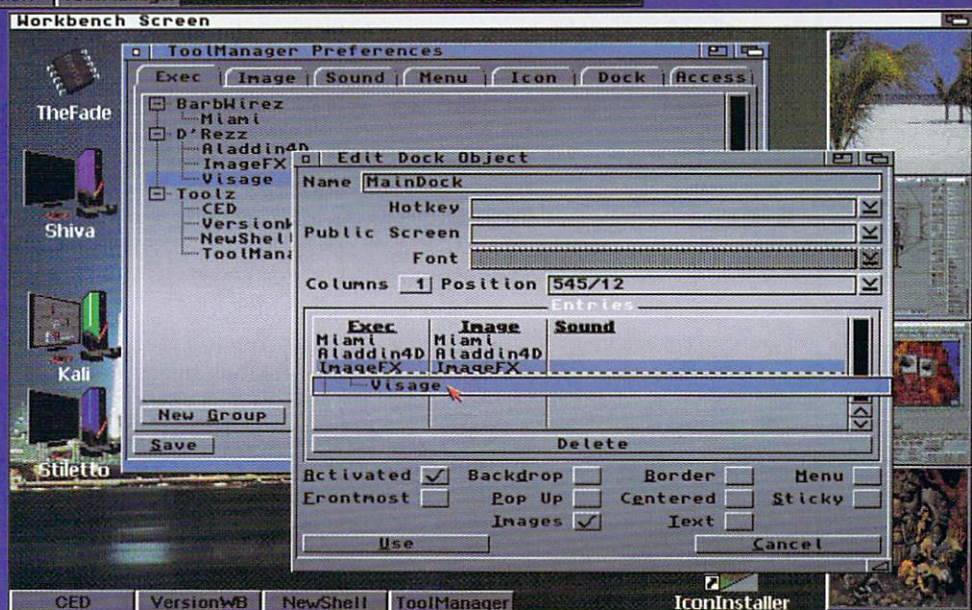
Figure 1. ToolManager in Action

Figure 2.
Edit Exec Objects



Figure 3.
Edit Image Objects

Figure 4.
Edit Image Dock Objects



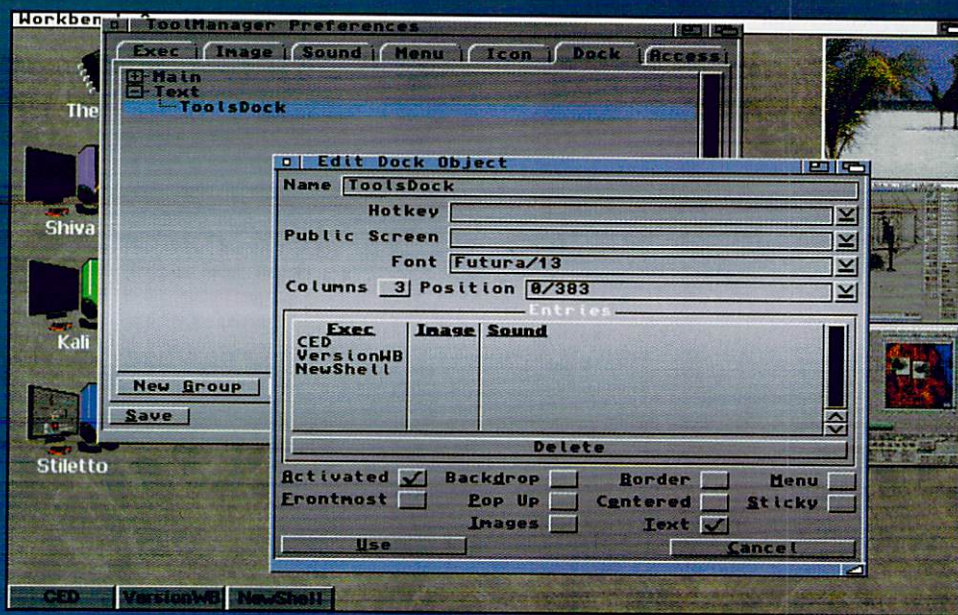


Figure 5.
Edit Text Dock Objects

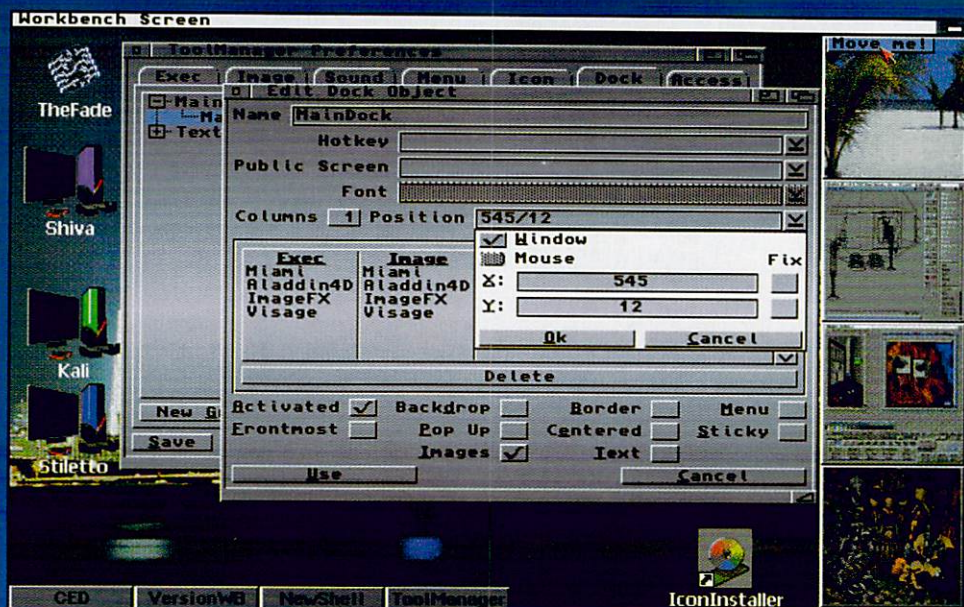


Figure 6.
Positioning your Dock

which Dock program you use, docks can be composed of plain text, icons, pictures, even animations. Along with the text or images, docks might also allow sounds, hot keys, and numerous other enhancements.

ToolManager

This issue, I'm going to cover a long time Amiga favorite, Stefan Becker's ToolManager. Just about anything you can wish for in a Dock program is available. Version 3 of ToolManager is a fairly radical break from the older versions, and has many new features, a new GUI, and is quite different in usage,

which has caused some users, myself included, a bit of confusion when trying to install and configure it. See Figure 1 for a screen shot showing several ToolManager Docks in operation.

Getting Started

Before you install ToolManager, a little planning is in order. You will need the latest Installer, available on Aminet. Since ToolManager uses datatypes to load the images, you will need the appropriate datatypes installed for the Images you wish to use. One Datatype in particular you may find useful is Oliver Seiler's Info datatype. This will allow you

to use icons, including NewIcons, for your ToolManager Docks.

Once you have all your datatypes installed and working, you need to decide on which images you will be using. If you are using standard NewIcons or Magic Workbench icons for your programs, then you might want to use the corresponding icons for your docks. This is the easiest and provides a consistent look to your Workbench. Aminet is chock full of icons in many styles suitable for dock usage.

You can also, if you want a more elaborate look, use bitmap pictures for your docks. You can use a paint program

to scale the pictures down in resolution and color to your needs. If you run on a high resolution/high color Workbench, you might like to use scaled down screen shots of your programs, or perhaps scans of their logos, for easy recognition.

Files you'll need from Aminet:

util/libs/mui38usr.lha
util/wb/ToolManagerBin.lha
util/wb/ToolManagerExt.lha
util/wb/TM30_PopMCCs.lha
util/wb/infoDT39.1.lha
util/wb/infoDT391_upd.lha

Configuration- The Grunt Work

Installation of ToolManager should be fairly straight forward, as long as you have the latest installer from Aminet. Once installed, run the ToolManager preference to configure the program.

Across the top of the ToolManager Preferences, you will see a series of tabs, Exec, Image, Sound, Menu, Icon, Dock, and Access. The Exec tab is where you will compile a list of programs you wish to run, and any parameters those program need. Start off by clicking on the Add new group. Select a name for the group. If you want, you can group your programs according to type, Apps, Games, graphics etc. Again look to Figure 1.

Next, click on New Object. This is the heart of ToolManager, and will require the most effort. The Edit Exec Object Window pops up. Here you will enter the name of the program, and all the sordid details it may require to run. The easiest way to do this is to drag the actual program icon onto the window. This will automatically fill in the details. For programs run from the shell, make sure you specify shell as the Exec Type. Also make sure the stack is high enough for the program. If the program's documentation doesn't specify a stack value, you can probably leave the stack at 4096. Click on the use button to go back to the Main Preferences window. Repeat this process until you have all your programs entered. See Figure 2 for the Edit Exec Object Window.

Step two is the Image Tab. Here you will pick the images you want to use for your Dock. If you are making a text only dock, then this part can be ignored. Click on the New Group button first, and



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Circle 149 on Reader Service card.

duplicate the groups you created in the Exec section. Click on New Object to enter the Picture or .info file you want to use. See Figure 3.

Once you have all the images selected, it's time to make your dock. Note you can also add sound, and select Icon or menu items, but for brevity, I will just cover the basic process of creating a dock.

Click on the Dock tab, then click on New Group. You might want to create separate groups for different purposes, say an image dock for your main apps, and a text only dock for utilities.

Click on New Object to create the actual docks. The Edit Dock Objects Window will open. Here you specify the name, appearance, composition and location of your docks. First, look at the center area labeled Entries. It has three subdivisions, Exec, Image, Sound. This is where you build the actual dock, by adding the programs and their images and sounds.

To add a program, click on the Exec tab in the main Toolmanager Preferences window, and click and drag an exec item over to the Exec subsection in the Entries section of the Edit Dock Objects. Use the same drag-n-drop procedure for the

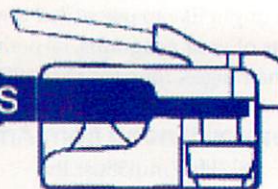
Images and sounds you wish to use. If you are making a text only dock, check the Text box in the lower part of the window, and make sure the Images button is not checked. See Figure 4 for the settings for an image dock, and Figure 5 for a text only dock.

To place your dock on the screen, either type in the x/y coordinates, or use the "move me!" window by clicking on the gadget next to the position window. Click on the Window box, then drag the Move Me! window to the location you wish for the upper left hand corner of the dock. Uncheck the Window box and click on OK when you are satisfied. See Figure 5.

Those are the basics of ToolManager. There is much more you can do, sounds, icons, menus, hotkeys etc., but I will leave those as homework for the adventurous. Next episode we will get into some more trouble...er...projects! See you then.

•AC•

Please Write to:
Dave Matthews
dm05438@navix.net
<http://www.geocities.com/SiliconValley/Hills/2359/>
or c/o Amazing Computing
P.O. Box 9490
Fall River, MA 02720



This issue brings some new JavaScript tricks, and update information.

Fun With Icons 1

One of the simplest ways to spiff up your Web pages, is to create dynamic icons for them. Using JavaScript, you can make an icon change from one image to another as the user's mouse pointer crosses over it. These "rollover" icons are also an effective way to alert users to the location of links.

Last month we used the onClick event handler to detect the user clicking the mouse button on a screen button. This time we will make use of two other event handlers to detect when the user rolls their mouse pointer over an icon, and when the pointer leaves the icon, changing the appearance of the icon for each event.

Start as usual with the basic HTML code to set up a Web page and get the browser ready for some JavaScript:

```
<HTML>
<HEAD>
<TITLE>Jumping Icons!</TITLE>
</HEAD>
<BODY>
<SCRIPT LANGUAGE = "JavaScript">
<!--
```

Now, since we want two different images displayed for the same icon, we will have JavaScript establish two variables cleverly named "one" and "two", with these lines:

```
var one = new Image();
one.src = "pics/one.gif";
var two = new Image();
two.src = "pics/two.gif";
```

Following each line opening the variable, is a line defining the source for each variable including the path to the source image. These lines also cause JavaScript to preload the image files so there is no delay when the image changes. This concludes the JavaScript section of our page, so add the following lines to end hiding the script from non-compatible browsers, and the close script tag:

```
// -->
</SCRIPT>
```

For our image, we use the standard HTML IMG tag, with some options, like this:

```
<IMG NAME = "js" HEIGHT = 32 WIDTH = 88 BORDER = 0
SRC = "pics/one.gif"></A>
```



Figure 1.
The basic appearance of our icon.

Figure 2.
Roll the mouse pointer over it, and
the appearance changes (insert).

Note that we give our image a name "js", define its height, width, and border attributes, then define its source as our first image. The name allows us to refer to this particular image within our document when we want to change the source of the image being displayed. At the end is the HTML tag to close the anchor point that we will open in the next fragment.

Between the close script tag and the above line, we add the following:

```
<A HREF = "Test"
onMouseOver = "document.js.src = two.src"
onMouseOut = "document.js.src = one.src">
```

The first bit of this fragment starts the HTML link tag, linking in this example to a dummy document "Test". Next is the onMouseOver event handler. When this is activated by a user placing their mouse pointer over the link, the source of the image named "js" in our current document, is set to the source of our variable "two".

When the mouse pointer leaves our link, the onMouseOut event handler restores the original image source, returning the image to its beginning state.

Finish our page by adding the closing tags for the body of our document, and the HTML with these lines:

```
</BODY>
</HTML>
```

and the final result is shown in Listing 1. The effects can be seen in Figures 1 and 2, and as always, this can be found by following the JS101 link on my Web site.

Updates

Things have been rather slow this summer on the update scene, but our JavaScript browser, AWebII has received a new patch, along with a new way to update it.

Visit the Amitrix site at: <http://www.amitrix.com> and follow the AWebII link. There is a small ARexx macro for you to download, decompress, and then run from the ARexx menu item on AWebII's main window. This macro examines your original AWebII installation disk and determines which patch file you need.

The patch brings AWebII to version 3.2, fixes a few bugs, and adds some functionality. AWebII browser windows are now AppWindows, which means if you drag an icon into a browser window, the file associated with that icon will be opened in the browser window. An Iconify menu item is also now included, which automatically flushes the memory image cache, as it iconifies AWebII. Any downloads in progress continue, and the icon is an AppIcon. Dragging a file icon to it will re-open AWebII, and load the file.

Also available for download is a set of updated NetSearch pages from Gabriele Favrin. These allow you to search many different search engines at the same time. A new version of the News Group library rounds out the current crop of patches.

IBrowse has also been updated to version 1.22, and the patch file is available from:

<http://www.omnipresence.com/ibrowse/>

Listing 1

```
<HTML>
<HEAD>
<TITLE>Jumping Icons!</TITLE>
</HEAD>
<BODY>
<SCRIPT LANGUAGE = "JavaScript">
<!--
var one = new Image();
one.src = "pics/one.gif";
var two = new Image();
two.src = "pics/two.gif";
// -->
</SCRIPT>
<A HREF = "Test"
onMouseOver = "document.js.src = two.src"
onMouseOut = "document.js.src = one.src">
<IMG NAME = "js" HEIGHT = 32 WIDTH = 88 BORDER = 0 SRC = "pics/
one.gif"> </A>
</BODY>
</HTML>
```

There were no details posted on the Web site, and since I don't have the commercial version of IBrowse, I cannot tell you what this patch affects. If you have IBrowse, definitely go grab it and check it out.

AmigaZone On Sale

In case you missed the announcement last month, Harv Laser, head AmigaZone Honcho, has made a deal with CalWeb Internet Services. CalWeb, which has been hosting the AmigaZone for some time now, has unbundled some features from the basic AmigaZone account. Now you can get the 'Zone with all of its exclusive files, chats, Amiga-specific mailing list, and more for only \$12.95 per month.

If you want the Unix shell account too, with its 10 megs of storage, and more, sign up for the AmigaZone Plus account at \$19.95 per month.

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Please include a SASE if you need a personal reply.

If you run an Amiga specific BBS, send me the information callers will need to access your system. Phone number(s), modem speeds, software settings, etc. As a service to the Amiga community I will include the information I receive in this column from time to time.

If you come across any World Wide Web sites you feel would be of interest to the Amiga community, pass them along for inclusion in the HotList of the Month. Send the info to any of my addresses above.

That's all for now. See you on line!

•AC•

Don't
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Don't Delay! Did You Miss September?



VOLUME 13, Number 9: September, 1998

New Products & other neat stuff, A4000 Tower Shortage, National's PCMCIA solution, Randomize's Amiga-PC network, & AmigaZone is sale priced!

ZAP! You're Cartoonized!, A hideous name for an interesting effect, by Nick Cook.

Cloud Castles, Data manipulation with Amiga software to create artistic representations and flights of fantasy for pure art and more, by R. Shamms Mortier.

Back to School with AMIGA, The Wheat Ridge Middle School of Denver uses the Amiga for art and more, Special report by R. Joe Obrin.

Aladdin4D: Cutting Torch Animation Project, Part 2: Modeling the torch head, by Dave Matthews.

This Old Workbench: Episode 21 Building the Perfect Workbench Part 4, Staying up to date on the latest versions can be tricky without VersionWB, best icons, improving the GUI and more, by Dave Matthews.

On Line, JavaScript: updating a previous script and learning lots of new tricks on the way, by Rob Hays.

Unix on the Amiga Part 4, Part 4: Understanding the different Unix commands and its unique file system, by Antonello De Santis

DPaint Cut-Paper Portraits, Use commands in DPaint to create your own caricatures for DTP and web use, by R. Shamms Mortier.

AmiWest '98, AmiWest, three days of seminars, speeches, prizes & more!

Hardware Project: Alternative Joy on the Amiga, Replace that old joystick with one of these new controllers, by George M. McDonald.

Genetic Species, In the world of complex 3D engines, getting a great game to market takes more than just faster graphics - and Genetic Species delivers that and more!, by Jake Frederick.

Check Out The August Issue.



VOLUME 13, Number 8: August, 1998

New Products & other neat stuff, Cloanto has given Personal Paint 6.4 freely to the Amiga community, Amiga International has a new poster, a new Amiga Developer CD and more!

Moving Textures 200, A new CD for computer graphics artists, animators, videographers, and more who want to add realism to their work, by R. Shamms Mortier.

Titling F/x, There are always means to make it sharper, clearer, and deliver your message on more than one level, by R. Shamms Mortier.

BitMap Editor (BME) How-to, Hidden within PageStream is a winning utility for translating bitmap graphics into infinitely "repurposable" vector graphics, by R. Shamms Mortier.

On Line, An updated program for web page authoring, and who is looking at our web pages with JavaScript, by Rob Hays.

This Old Workbench: Episode 20 Building the Perfect Workbench Part 3, In our quest for the Workbench of our dreams, it is time to start the long and winding road toward customized Nirvana, by Dave Matthews.

Linux/Amiga: Adding a Hard Drive to Your Linux System, Always err on the side of caution, by Nick Cook.

Unix on the Amiga Part 3, Part 3: Software to make your Unix-based Amiga more efficient and productive by Antonello De Santis.

International Amiga '98 Exhibitors, A list of who was there and what they did!

The Greatest Show in Canada, A behind-the-scenes look from a vendor's unique perspective by an author who wished to remain unknown.

Heavy Metal - Creating Metallic Type, DTP tricks and tips "Amigaized", with DrawStudio, PageStream 3.2, and ImageFX by Nick Cook.

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Recent History! Did You Miss The July Issue?



Volume 13 Number 7 July, 1998

New Products & other neat stuff, Air Mail Pro v3.0, World News v1.0, PanCanvas: Motion Control for ImageFX, and more!

That Lived-in Look, Often, computer generated art just looks too clean! LightWave 5 offers almost an infinite variety of ways to "dirt-up" your detailed computer generated imagery, by R. Shamms Mortier.

Aladdin 4D: Cutting Torch Animation Project, Step 1: Creating an animation first requires a detailed knowledge of what the animation will do, what it will need, and how it will be used, by Dave Matthews.

Applying Textures to Fonts and Clip Art, Using textures to create just the look you want in your documents and art, by Nick Cook.

On Line, Catch the news on the latest versions of World News for newsgroup reading and Air Mail Pro for e-mail, by Rob Hays.

This Old Workbench: Episode 19 Building the Perfect Workbench Part 2, Real world perfection differs from user to user. Here are a few ideas on how you can maximize your Amiga to provide the perfection you want, by Dave Matthews.

Linux/Amiga: Do You Have an Account with Us? Part One: Learning the Linux hierarchy, key phrases, and setting up your accounts.

Unix on the Amiga Part 2, Installing the software, by Antonello De Santis.

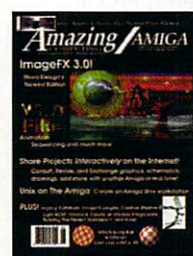
Amiga Inc.'s Announcements, Amiga Inc. has an approved plan: Amiga Bridge, 4.0, Convergenceware, Amiga OS 5.0, and more!

World of Amiga LONDON 98, The latest news and releases from the world's second largest Amiga show. Allan Havemose, Dr. Allan Havemose, Head of Development for Amiga Inc., is Amiga's next generation?

"I don't get a single technical journal that covers as much important information as your February issue did, even in magazines 10 times as thick. There was news in there that had not been made stale by the plethora of news on the Web."

Steve Shireman

High Praise! Did You Miss An Issue of AC?



Volume 13 Number 6 June, 1998

New Products & other neat stuff, Video Toaster Flyer Systems Sale, Another User Group Deal, Amiga Soundtrack, and more!

ImageFX 3.0, Nova Design has once again proven the Amiga's graphic might, by R. Shamms Mortier.

The Legacy Catalyst Videos and ImageFX Plugins, Tools in a new era of ImageFX and Amiga graphics, by R. Shamms Mortier.

Light ROM: version 4, 3,000 JPEG textures plus much more makes this a special addition to any Amiga artist's tool box, by R. Shamms Mortier.

Me & My Shadow, Creative shadow effects, by Nick Cook.

On Line, Updates to Miami and VoyagerNG plus, "count down days" with JavaScript, by Rob Hays.

This Old Workbench: Episode 18, Building the Perfect Workbench Part 1,

Learn what all the Amiga's directories do and how to further "Shock-Proof" your system, by Dave Matthews.

AmigaOnline.com NOTES: Safe Harbor is offering online stores to web sites, AmigaOnline.com is delayed, and more.

Interactive Image Viewing on the Internet with the Amiga, Medical images, paintings, sketches, floor-plans, schematics, and more can be shared and revised online, by Michael Tobin, M.D., Ph.D.

Wildfire—Animation Sequencer, Assemble an animation, combine animations and stills, generate special effects, create transitions, and even add frame synchronized sound effects, review by Dave Matthews.

Unix on the Amiga, Turn your Amiga into a powerful Unix workstation. Preparing your system and gathering the software, by Antonello De Santis.

Which Boing Is Official? There are two Boing Balls used as the official emblem of the Amiga. Which would you like to see as the Amiga's main symbol?

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Audio on the Amiga

The Amiga has had advantages in the audio segment of the multimedia market. However those advantages are being eclipsed. The support of Amiga users for the current products and those in production is essential to allow the Amiga to recapture its position.

Special Report by Roger Angus.

Some people, (probably the same "some people" who think that Elvis is still alive) believe the Amiga can still hold its own today in audio. This article is for those people.

The sad fact is, while once the basic Amiga's hardware was hailed as being truly ground breaking, it is now poor in comparison to what the most basic PC can offer. Paula, our sound chip, has not been upgraded since the days of the A500 and it still kicks out 4 channel 8-bit sound at what, by modern standards, are poor sampling frequencies. Sure, some programs gave her a semi lease of life by making her play a mix of any number of tracks (dependant on processor speed) in 14-bit audio; but for the likes of me, this is more harm than good by choosing to only close the gap on the competition by a small amount as they, in turn, leaped further away.

All is not lost though! Soundcards are coming down in price, new ones are being marketed and it seems we may be approaching the time when all our creativity may be matched with the audio quality we deserve. Delfina, Prelude and other Zorro cards are available for those of us with Zorro II or

III slots and a new card for the basic A1200 will help the rest of us by enabling us to make the jump to...16-bit!

But does this mean anything to the average MOD tracker or games player? Well, aside from issues concerning audio quality and clarity, the move to 16-bit puts us back in the professional audio domain. We can no longer be laughed at, sampling at 48Khz (DAT or Digital Audio Tape quality) in 16-bit resolution. Plus, who knows, some of the high-end programs that have left us may well return to the fold, following the example of Samplitude Opus.

More optimistically, a higher audio profile, coupled with what we know the Amiga excels in other areas (multitasking, GFX, low resource overheads) may lead many to see the Amiga as a cost effective solution to their needs. We may begin challenging the PC in niche markets such as multimedia production, point-of-sale displays or even in schools.

Okay, maybe the last one was a leap too far, especially in England where Tony Blair has bowed down to the Juggernaut (Bill Gates), endeavour-

ing to make sure every school has a PC in it by the year 2000. However, until the now already mystic and hallowed new Amiga appears, with its hinted-at graphical and audio wizardry in 1-2 years time, we need to know what we have in our hands at the moment.

The vast majority of new Amiga soundcards offer 2-channel 16-bit audio up to at least 44.1Khz (CD audio quality). This should be considered the most basic of requirements for a modern computer. Others offer added features such as Delfina's built in DSP (Digital Signal Processor) for adding real time reverb, echo, distortion, etc. or Prelude's full duplex operation. For high-end users this is possibly the most exciting development as suddenly the Amiga can assume the role of a cheap 4 track or even 8 or 16 track analogue machine of the sort every musician owns at some point in their career.

With full duplex, it is possible to playback and record at the same time so that, for instance, a click track can be recorded to keep everything together in time whilst guitars, bass, vocals, keyboard, etc. are added at or above CD quality. Buy a CD- writer and suddenly

you have your own album on your hands! It goes without saying that all the benefits of digital are there as well: precise editing, manipulation, effecting and, in some cases even MIDI.

Of course, being able to only record 2 tracks at a time limits the Amiga's use in bigger applications unless either the mixing from any number of sources into 2 channels is excellent (try recording a drum kit well with only 2 microphones!) or you are in a lo-fi band and you don't care anyway!

The two Sunrize cards of a few years ago offered 4 or 8 input recording but were expensive and haven't been in production for some time now, however, they are still eagerly sought. All is not lost though as the German company ACT plans to release their 6 input Zorro III card, named Festiva, very soon, and for a good price.

All of this is of little use to anyone but the serious enthusiast. Most people don't have 6 sources to record at the same time, let alone the 6 buss mixing desk to do it well. Another issue is the system overheads for such a job. A 74 minute audio CD takes up 650 Mb of disk space. That's with only 2 tracks, left and right for stereo, so imagine the space on your HD needed for an album's worth of 16 track masters—5.2 Gigabytes!

In addition, consider the processing power needed to mix 16 tracks of DAT quality audio in real time. I have known 060s to struggle! The downside of this is that a lot of money needs to be spent to get even close to a system that can handle these requirements. The upside is that it can be done and that most people can still benefit from this quality with a more meager system.

For instance, how many people would use, in a 5 minute piece, 5 minutes of, say, 4 or 5 channel drumming? Very few. A small collection of carefully nurtured stereo drum loops usually does the trick. How many people use 5 minutes of mono or stereo vocals? You'd be pretty silly if you didn't delete the gaps between phrases, silence while the guitar solos on in verse 3, etc. Suddenly this 16-bit stuff looks more rewarding.

We still haven't looked at the available software yet. One area in which we could make savings (in terms

of HD space) is to look at using MIDI. This is because MIDI is, in some ways, the direct opposite of sampling as it only consists of very small streams of information directed either to an external sound module from your Amiga or from an external controller (usually a keyboard) to your Amiga.

This information, much like the information contained in a conventional musical score, takes up (in computing terms) practically no room with a good number of complete songs fitting on an Amiga floppy disk. Add to this the prospect of automated mixing (moves of the faders by the mouse on the screen are remembered) and MIDI can do a vast amount on even a standard A500.

Modern sound modules are relatively inexpensive and provide a good range of sounds from woodwind to drum kits at excellent quality and, for

to sustain the Amiga's audio revival. One day we may even have a port of Cubase VST (the PC's leading package) or one day we may have an Amiga with built-in midi ports! One day—well, you never know!

Improvements Ahead

Things are looking up in the Amiga audio world. Nearly ready for release is a new DSP/non linear editing system from the makers of Audiolab 16. The package is called ProStation audio and, although details are scarce, if it can build on Audiolab's achievements it could eclipse all other Amiga audio packages and a great deal of PC and Mac ones to boot.

The one problem that faces us is the same old economies of scale one which has overshadowed the Amiga since the start. For radical new hard and software

The vast majority of new Amiga soundcards offer 2-channel 16-bit audio up to at least 44.1Khz (CD audio quality). This should be considered the most basic of requirements for a modern computer.

instrumental work, can allow anybody with the time and talent to compete with the best. But the one thing they can't do is record (or sample) sounds they only can utilize the sounds they possess internally. In other words, even the most expensive MIDI module will not contain the vocals for your latest song performed by your girlfriend (or boyfriend!). So we go back to the earlier problem of sampling, but with the added agenda of incorporating a good MIDI sequencer into the software. Unfortunately, at this point in time, no such software really exists, the only one still in development is Camouflage, which, unfortunately in my opinion, possesses a less than friendly GUI.

Bars and Pipes (still the best MIDI sequencer) has, at best, only shaky 16-bit support through AHI and Music-X is, and will probably will be forever, tied to Paula's 8-bit, 4-channel capability. Things may change in the near future if enough people shout about it and are prepared to part with their cash

to be developed there has to be a certain amount of people willing to pay for it. This predicament is evident more in audio than in anything else as a good package needs all the time, effort and skill of a good wordprocessor or rendering program to produce, and yet more people want wordprocessors and rendering packages than professional audio software. Modern Amiga programmers exist in the smallest of niche markets and so the only thing to do is to support them if you want to use their programs. Obviously you'd be a fool to part with money for something you won't use, but if you check what is out there, try the demos and weigh up the pros and cons you could find an application which will give you and your Amiga a new lease of life.

Web sites

ACT <http://www.act-net.com>

Audiolabs <http://www.audiolabs.it>

SoundFX: <http://www.imn.hrwk-leipzig.de/~kost>

•AC•

Unix on the Amiga! Turn your Amiga into a powerful Unix workstation.

Part 5: NetBSD System Administration.

By Antonello De Santis

NetBSD, as well as every other Unix OS, is a multiuser system, it's therefore necessary to be aware of how to set up everything correctly so that every user can operate on the system.

A Brief Introduction.

The greatest part of the time computer users work on single user operating systems, that is, you just turn the machine on and start working as soon as the operating system is loaded. You are not accustomed to thinking of other people that may also

be using your computer. You simply install the programs you need and customize the system according to your needs.

Under Unix, things are different. We can divide users in three main groups. First is the root, who is the system administrator and has TOTAL control of the system. Next are operators, who can have different jobs such as checking users' quotas, mounting new filesystems or installing new software. Finally, we have common users who can just run programs and cannot modify system configuration.

Root has to be very careful modifying the system. He has to take care of many different aspects. It is possible that, after installing a new program, you test it as root and everything seems to work properly. Remember however, you are root and you have total control on the system! You can't be sure that the common user can run that program in the same way you did, unless you log in as a normal user and test it. In fact it's possible that the program you have just installed has its permission bits set so that only the root can run it! Let's start explaining how to add new users to your NetBSD workstation and give them some permissions.

The password file.

A typical password file is shown

in Box 1a. An entry in the password file (/etc/passwd) is made up of 7, colon (:) separated fields, each one having a particular meaning:

1. Login name: This is the login name of the user, used to log into the system. This is the only field of the password file that must be unique, that is, different users can't have the same login name.
2. Password: The second field is the user's password. It contains an encrypted password or a '*'. In the second case the passwords are "shadowed". The password file can be read and copied by every user in the system; you may say: "The password is encrypted, so nobody can steal it!". This is not true. There are many programs around to decrypt passwords; well, they don't really decrypt passwords, they take a particular dictionary file as input and crypt every word or combination of words in it until they find a match in the crypt password field of the passwd file. When passwords are shadowed these programs can't work because they just find a '*' in the password field; the real crypt passwords are kept in the file "/etc/master.passwd", that can only be read by root.
3. UID: This field is the user's identification number. Different users can have the same UID, but this could cause some problems at times, so it's better to keep it unique. Users' identification numbers can be in the range [0..65535]. A UID of 0 is reserved to the root, commonly called superuser. 65535 is generally used for "nobody", a user with no privileges.

The custom is to divide the range of UID numbers in this way: [1..99] are reserved for system users, who have privileges to modify some configuration files of the system. [100..999] are usually kept for "semi-privileged" users, who have some control on the system, but obviously can't accomplish delicate operations like the shutdown of the system or

Box 1a: /etc/passwd

```
root:*:0:0:Dio sceso in terra:/root:/usr/local/bin/bash
toor:*:1:0:Bourne-again Superuser:/root:/usr/local/bin/bash
daemon:*:1:31:The devil himself:/sbin/nologin
operator:*:2:20:System &:/usr/guest/operator:/bin/csh
bin:*:3:7:Binaries Commands and Source:/sbin/nologin
news:*:6:8:Network News:/var/spool/news:/sbin/nologin
games:*:7:13:Games pseudo-user:/usr/games:/sbin/nologin
uucp:*:66:1:UNIX-to-UNIX Copy:/var/spool/uucppublic:/usr/libexec/uucp/uucico
nobody:*:32767:9999:Unprivileged user:/nonexistent:/sbin/nologin
ingres:*:267:74:& Group:/usr/ingres:/sbin/nologin
falken:*:32766:31:Prof. Stephen &:/usr/games:/usr/games/wargames
ciccio:*:300:7:Prova di utente:/home/ciccio:/usr/local/bin/bash
vincio:*:302:10:eoo forza magica Roma!!!:/home/vincio:/usr/local/bin/bash
```


adding new users. [1000..9999] are for local users who can just run "productivity" programs such as c/c++, emacs, browsers and so on. [10000..65534] are for remote users who connect through the internet, like FTP anonymous users or HTTP users. The command "id" tells the user his UID number.

4. **GID:** The fourth field contains the primary group identification number of the user. Every user belongs at least to a group. To find out his group(s) number(s) the user can use the command "groups". In this field the root must type in only the primary group identification number. If you want to add the user to another group you have to modify the file /etc/group and not add another GID in the user's GID field! The GID field can contain only ONE group identification number, that is the primary group the user belongs to.

5. **Comment:** This field simply contains a comment about the user.

6. **Home directory:** This is the user's home directory, where he can create new files or directories. You have to specify the whole path, for example: "/home/students/smith". When the user logs into the system he will find himself directly in his home directory; if he got lost around the directory tree he can go back to his directory simply typing in "cd ~".

I advise you to keep users' home directories in the biggest partition (/usr), it's better to leave root partition (/) just for system commands and programs. You can eventually mount a whole partition on "/home" just for users' home directories, but I don't think that many of you will need a whole partition for that!

7. **Default shell:** In this field the default shell of the user is specified. The root has to write in the absolute path of the shell, for example: "/usr/local/bin/bash".

Box 1b: /etc/master.passwd

```
root:23TBhLMiXiy0o:0:0:0:Dio sceso in terra:/root:/usr/local/bin/bash
toor:TqgU4MHQ5Wsow:1:0:0:0:Bourne-again Superuser:/root:/usr/local/bin/bash
daemon:*:1:31:0:0:The devil himself:/sbin/nologin
operator:*:2:20:0:0:System &:/usr/guest/operator:/bin/csh
bin:gkdKj/YxLut6:3:7:0:0:Binaries Commands and Source:/sbin/nologin
news:*:6:8:0:0:Network News:/var/spool/news:/sbin/nologin
games:*:7:13:0:0:Games pseudo-user:/usr/games:/sbin/nologin
uucp:*:66:1:0:0:UNIX-to-UNIX Copy:/var/spool/uucppublic:/usr/libexec/uucp/uucico
nobody:*:32767:9999:0:0:Unprivileged user:/nonexistent:/sbin/nologin
ingres:*:267:74:0:0:& Group:/usr/ingres:/sbin/nologin
falken:VleGJXAKDS7GA:32766:31:0:0:Prof. Stephen &:/usr/games:/usr/games/wargames
ciccio:IN/OGfl/5KN1A:300:7:0:0:Prova di utente:/home/ciccio:/usr/local/bin/bash
vincio:VEjKEVb05BwvM:302:10:0:0:eoo forza magica Roma!!!:/home/vincio:/usr/local/bin/bash
```

The group file

A typical group file is shown in Box 2. An entry in the group file (/etc/group) is made up of 4, colon (:) separated fields: group name, group password, GID and group members. Group name and GID are self explanatory. The group password is never used because every member of the group should know it and so there wouldn't be any improvement of protection, you'll simply write a "*" in this field.

The group members field contains the login names of the users belonging to the group. The names of users must be separated by commas as you can see in Box 2.

Reviewing the ls -la command

At first glance, you probably won't notice all the information that "ls" with options "-la" gives you. These are very important to check and then modify the permission bits of files and directories.

Suppose that you run the command "ls -la readme.txt", the output would be something like: "- rw-x r-x r-x 1 root wheel 1024 Aug 24 16:22 readme.txt". The most interesting fields are the first, third and fourth. The second is the number of links to the file and the others are the date of last access, dimension and name of the file.

In the first field you can see ten bits. The first bit indicates the file type:

file, directory or link. The other 9 bits are the famous "permission bits" and are divided in this way: the first three bits define the privileges of the file's owner on the file, the second three bits define the privileges on the file of the users in the same group of the file's owner, the last three bits define the rights on the file of every other user in the system.

In a scheme:

(u)ser	(g)roup	(o)thers
1. rwx	2. rwx	3. rwx

Box 2: /etc/group

```
wheel:*:0:root,ciccio
daemon:*:1:daemon
kmem:*:2:root
sys:*:3:root
tty:*:4:root
operator:*:5:root
bin:*:7:bin,ciccio
news:*:8:
wsr:*:9:
users:*:10:ciccio
games:*:13:
staff:*:20:root
guest:*:31:root
nobody:*:39:
utmp:*:45:
ingres:*:74:ingres
dialer:*:117:
nogroup:*:32766:
```


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Each bit sets a particular privilege: the first bit sets reading privilege, the second writing privilege and third executing privilege (rwx -> Read Write eXecute). In the third field is written the name of the file's owner. In the fourth field there is the group's name.

How to change privileges

There are several commands to change permissions on files and directories. The most important are: `chmod`, `chown`, `chgrp` and `umask`.

- `chmod`:

`Chmod` is the command to change the permission bits of a file or a directory. Its general syntax is: "`chmod mode file(s)`". The mode is the permission you want to assign. It can be set in two ways: symbolic or absolute. You can add or remove three different kinds of permission on a file: `r` (read), `w` (write) and `x` (execute or search). The nine permission bits, as you've read a few lines above, are relative to file's owner or user (`u`), users belonging to the same group of the file's owner (`g`) and all the other users of the systems (`o`). These three categories are called "entities".

Symbolic

To add a permission you have to write a '+' between the entity you want to give a permission to, and the kind of permission you want to give it. You have to write a '-' if you want to

remove a permission. You have to type '=' if you want to set the permission "equal to" something. Let's see some examples to make everything clearer.

Suppose we want to set some permissions on file "test" and we start from the following situation: "`rw-r-x-r-x`". In this case the owner of the file can read, write and execute the file, the users in the same group of the owner can read and execute it and all the other users can only execute it. Now suppose the user wants to remove the write permission from himself, he should run the command: "`chmod u-w test`". This means that he wants to remove (-) the (w)rite permission from himself (u). Now the situation would be: "`r-x-r-x-r-x`".

If he tried to delete file "test" he would be prompted with an "access denied". Now if he wanted to add write permission to his group(s) and all other users he should write: "`chmod go+w test`". This means that he wants to add (+) the (w)rite permission to his (g)roups and to all (o)ther users. Now the situation would be: "`r-x-rwx-rwx`".

Let's suppose that now he wants to remove the execute permission from himself, groups and others. He should write: "`chmod ugo-x test`" or "`chmod a-x test`" where 'a' stands for 'all'. The new situation is: "`r--r--r--`". Now if he wants to set brand new permissions, for example read and execute for everybody, he should write: "`chmod =rx test`". When you omit the entity `chmod` assumes by default (a)ll. The nine bits would now be like this: "`r-x-r-x-r-x`".

If you want to set privileges for user, group and others running `chmod` just once you have to separate the mode for each entity with a comma. For example: "`chmod u=rwx,g=rx,o=x`". This would set the privileges to: "`rw-r-x-r-x`". Clear isn't it?

Absolute

This is a faster way to set permissions on a file, but it requires a little knowledge of binary arithmetic, check the box "Binary arithmetic basics". The general syntax to use `chmod` in the

absolute way is: "`chmod NNN file`", where NNN is a number in the range [000..777]. Each digit is relative to one of the three entities: owner of the file, groups, others. The first digit is relative to the owner, the second to groups and the third to others.

You have to translate each decimal base digit in its binary base equivalent; for each digit in the binary number, if it's a '1' then the corresponding permission bit is set else if it's a '0' the corresponding permission bit is not set. I'm sure this is not clear at all, so let's see an explicative example.

Let's suppose we are setting permissions on file "test" and the initial situation is: "`r-x-rw-r--`". If we run the command: "`chmod 741 test`", the new permissions will be: "`rw-r--r-x`". Why is that? Let's translate each digit in its binary equivalent: 7=111, 4=100, 1=001. 7 is relative to the owner of the file, its binary equivalent is 111, we find three '1', so read, write and execute bits are set. 4 is relative to the groups, its binary equivalent is 100, so only the read bit will be set. 1 is relative to others, its binary equivalent is 001, so only the execute bit will be set. In a scheme:

owner	groups	others
rwx	rwx	rwx
7	4	1
111	100	001
rwx	r--	-rx

This should have made things much clearer. Let's see another example: "`chmod 532 test`". The new permissions will be: "`r-x-rw-r--`". In a scheme:

owner	groups	others
rwx	rwx	rwx
5	3	2
101	011	010
r-x	-wx	-w-

As soon as you acquire some experience with binary arithmetic you will prefer to use the absolute method to set permissions, maybe it is a bit less intuitive, but surely much faster.

- chown

This command is used to change the owner of a file or directory. Its general syntax is: "chown login_name | UID file", this means that you can use chown both with the login name or UID of the user. If you run the command "chown smith /docs/faq.txt", you set "smith" as new owner of file "/docs/faq.txt". User smith can then change the permission bits of the file with command chmod as he prefers.

- chgrp

Chgrp is very similar to chown, the difference is that it changes the group to which the file belongs instead of the owner. Its syntax is: "chgrp group_name | GID file".

- umask

This command sets the default privileges of every new file or directory the user creates. Its syntax is equal to chmod's symbolic mode; you can use umask also with absolute mode, but it works a bit differently, refer to the manual pages to see the right syntax. If you run the command "umask u+rw,g+rx,o+r", from now on every file and directory you create will have the following privileges: "rwx r-x r--".

Adding a new user

Adding a new user to the system is quite a simple job, it should take less than a minute. You must have logged into the system as root of course. Follow these steps:

- 1) run the command "vipw".
- 2) add a line in the password file and fill each field with the information about the user, then save and exit.
- 3) run the command "passwd new_user_login_name" and set the password for the new user.
- 4) create his home directory and set the privileges and owner of the directory. I advise you to set these permissions: "chmod 755 /dir_name".
- 5) copy into the user's directory the configuration files of his default shell and a ".profile" example.

Box 3: Binary arithmetic basics

In a binary system only two symbols are used to make up every number, the two symbols commonly used are 0 and 1. An N digits binary number can make up every decimal number in the range: $[0..(2^N)-1]$. For example with a three digit binary number you can make up every decimal number in the range $[0..7]$.

000	0
001	1
010	2
011	3
100	4
101	5
110	6
111	7

The common algorithm to convert decimal numbers into their equivalent in binary base is the following:

- 1) Divide the decimal number by 2 and write the remainder.
- 2) Divide the quotient until it becomes 0 and go on writing every remainder.
- 3) Write each remainder from the first to the last, from right to left; this series of 0 and 1 is the binary equivalent of the decimal number.

Example:

Decimal number: 13	
13 / 2 = 6	remainder 1
6 / 2 = 3	remainder 0
3 / 2 = 1	remainder 1
1 / 2 = 0	remainder 1

Binary number: 1101

As usual there is an easier way to convert decimal numbers into decimal. Consider the example below:

$$13 = 8 + 4 + 1$$
$$13 = 2^3 + 2^2 + 2^0$$

Can you notice something? Each position in the binary number is a power of 2. For each 1 in the binary number you have to calculate its corresponding power of 2 and then add every power you have calculated. The right most position is 2^0 , then 2^1 , 2^2 , 2^3 and so on. According to the above example we would have in a scheme:

1	1	0	1
2^3	2^2	2^1	2^0
8	4	1	
$8 + 4 + 1 = 13$			

Another example:

1	1	1	0	0	1	0
2^6	2^5	2^4	2^3	2^2	2^1	2^0
64	32	16			2	
$64 + 32 + 16 + 2 = 114$						

So the binary number "1110010" is equal to "114" in decimal base.

This is all, the new user can finally log into the system! If you want to remove a user you have to again run "vipw" and delete the line relative to the user you want to remove.

Now it's your turn! Test in depth every command I have explained. Under Unix, setting privileges is very important both for the security and the efficiency of the system.

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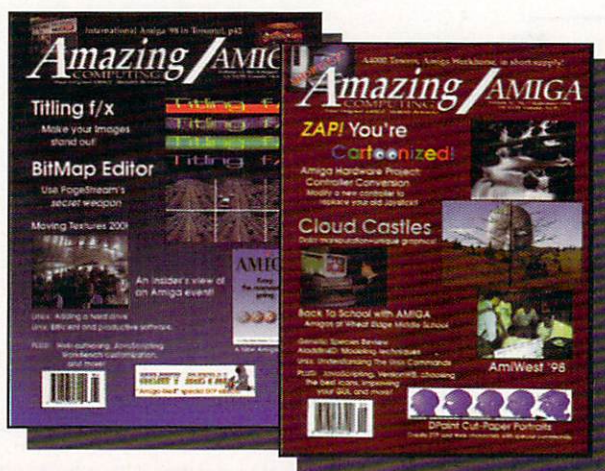
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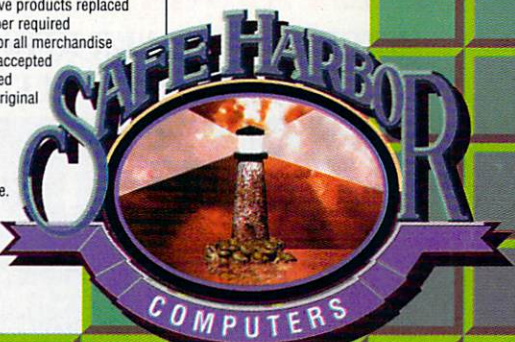
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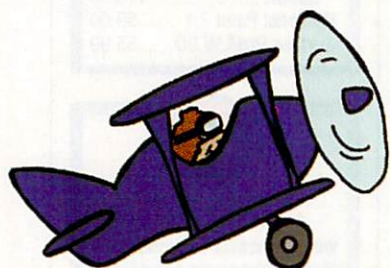
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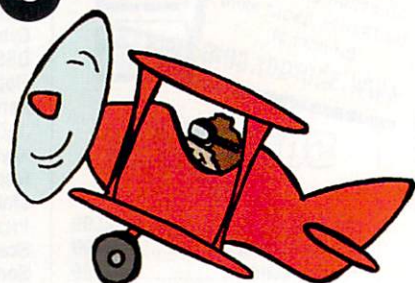
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Wingnuts



Is it a great challenge
or another name
for frustration in the Air?



by Jake Frederick

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A quick glance at the documentation made it fairly obvious that Wingnuts is not your typical game. Once I had read *A beginners guide to the chortling capers of the Wingnuts multiverse*, I was convinced I was in for something a little bit off the beaten path. After outlining the proper mix for planetary muffins (which just happens to include 2 dogotons of Enlightened Alien Magic Toadstools), it goes on to explain planet Holy Doobie's favorite sport where six combatants in heavily armed, flying contraptions battle it out in a small arena. The game puts you in one of these odd machines and leaves you to fend off the five psychos that are trying to blow you out of the sky.

After choosing one of the wacky pilots and arming a vessel, I set off into the 3D world to kick some pride. However, this was much easier said than done. No sooner had I entered the arena, when I was greeted with a high pitched beeping sound that indicated one of the five computer controlled players had achieved a missile lock on me. A feeble attempt to maneuver

Circle 155 on Reader Service card.

The best recommendation for beginners would be to find a few friends, turn off all of the computer opponents and use one of the multiplayer modes. Up to four players can compete using a null modem cable.

myself out of harm's way was completely in vein as moments later a missile was sent hurdling in my direction.

After dropping a few decoys, I figured I had foiled my opponent and was on my way. No such luck. Once again I found myself seconds away from being annihilated by a leather-jacket-wearing dog in a giant blimp. After repeating this scenario a number of times, I was faced with the harsh reality that my decoys had been depleted. By this time, the lock on warning had become incredibly annoying and it was just one of the contributing factors to my growing level of frustration.

According to the manual, there are three techniques for evading missiles. Since I had already ruined my chances of successfully using the first tactic, I decided to try the others.

The combat area is a wraparound arena, meaning once you hit an edge, you are automatically transported to the opposite side. This should be very beneficial in this situation since the missile cannot pass through the teleport walls and it will explode on contact with them. However, it is virtually impossible to locate the edge of the arena until you have passed through it, making it a difficult task to use this to your advantage. Even the radar at the top left-hand corner of the screen does little to assist the location of these boundaries. In fact, it really does little of anything useful, but that's another issue.

It is also suggested that you drop to only a few feet above ground in an attempt to cause the projectile to hit something else, which brings me to another gripe. There is no way of telling where the ground is in relation to your machine. There is no altitude reading and the ground lacks any detail that would indicate how close you were to impact. This can lead to many embarrassing crashes.

When all else fails, you are supposed to "start throwing your contraption about in the hope that the missile will miss you". As you might have guessed this is generally not very successful.

Multiplayer Modes

The best recommendation for beginners would be to find a few friends, turn off all of the computer opponents and use one of the multiplayer modes. Up to four players can compete using a null modem cable. This gives you an opportunity to compete against someone who is a little bit less precise when targeting and usually not quite as relentless when in pursuit of your machine. It also allows you to get a better idea of what each weapon does and how to use it to its fullest capability.

Wingnuts' View

Visually, Wingnuts is nothing stunning. The land is adorned with a few mountains and the occasional cactus, but other than that, the 3D graphics are quite bland. The upside is it allows faster gameplay, which is

something an action game of this type requires. The characters are stylishly drawn and each has their own animated actions they perform during flight. Despite this and the overall polished feel, it still seems as if you are playing a game that is several years old. I guess nostalgia isn't necessarily a bad thing, though.

Conclusions

I would be lying if I were to say that I wasn't drawn into Wingnuts in some strange sort of way. Perhaps it's the all-action departure from the average flight simulator, or maybe it's simply the animations of the characters "up-chucking" over the side of their contraption. Either way the game does have a unique style that is quite refreshing in a time when clones are so prevalent. I guess the biggest let down is that Skunkworks really could have had something decent had they improved the minor flaws in the gameplay and made it a little bit easier for the novice. On the other hand it is quite a deal considering the registration price is only 5 pounds (around \$8). The game began as a commercial release, retailing at about 15 pounds, but was changed to shareware when the authors wanted it to reach a broader audience. Given this I would say, despite its drawbacks, Wingnuts is a pretty good value for the small fee it asks.

Download Wingnuts at <http://www.anakin1.demon.co.uk/skunkworks>

•AC•



Pyromania effects add hot looks to your images

by R. Shamms Mortier



You have seen the Pyromania F/X used on TV and in the movies, whether or not you realized it. Almost every major film that has used explosions, fireworks, sparks, and other pyrotechnics added digitally in the post production edit has taken advantage of the Pyromania footage. The Pyromania footage is not based upon rendered particle system F/X, but is instead footage of the real stuff, taken by high end pro camera people, and post edited to clean it up for digital overlay work. Until recently, this footage was available only for Mac and Windows platforms, but a recent

release has now made it available for Amiga users as well.

What's Included

First of all, realize that this stuff comes on a CD-ROM. 99% of all Mac and Wintel users have a CD-ROM installed in their systems, but Amiga users are only about 50% CD-ROM enabled (if that). That's because the Amiga became a graphics and animation engine long before CD-ROMs were on the drawing board (at least affordable ones), and a good many Amiga users are still working with their original systems. So if you

don't have a CD-ROM as part of your Amiga experience, purchase one. The newer Amiga software is going to demand one anyway, and they are relatively inexpensive at this point.

The Pyromania CD is an ISO 9660 CD, so it will display on an Amiga, Mac, or PC. The contents however are pure Amiga, from the IFF files to the Amiga ANIMs and other addendum content. Here is what's included:

An Explosions folder with four explosion types: Aerial (40 frames), Fiery (76 frames), Shockwave (60 frames), and Sparks (52 frames). All of these animation single file

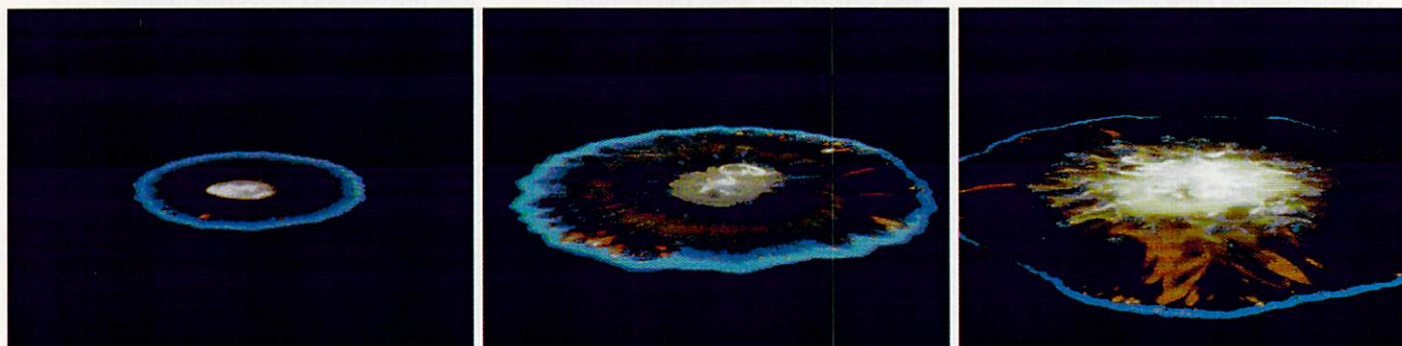


Figure 1. The Pyromania Shockwave footage displays one of the most spectacular space effects in the volume. Use it for your sci-fi animations.

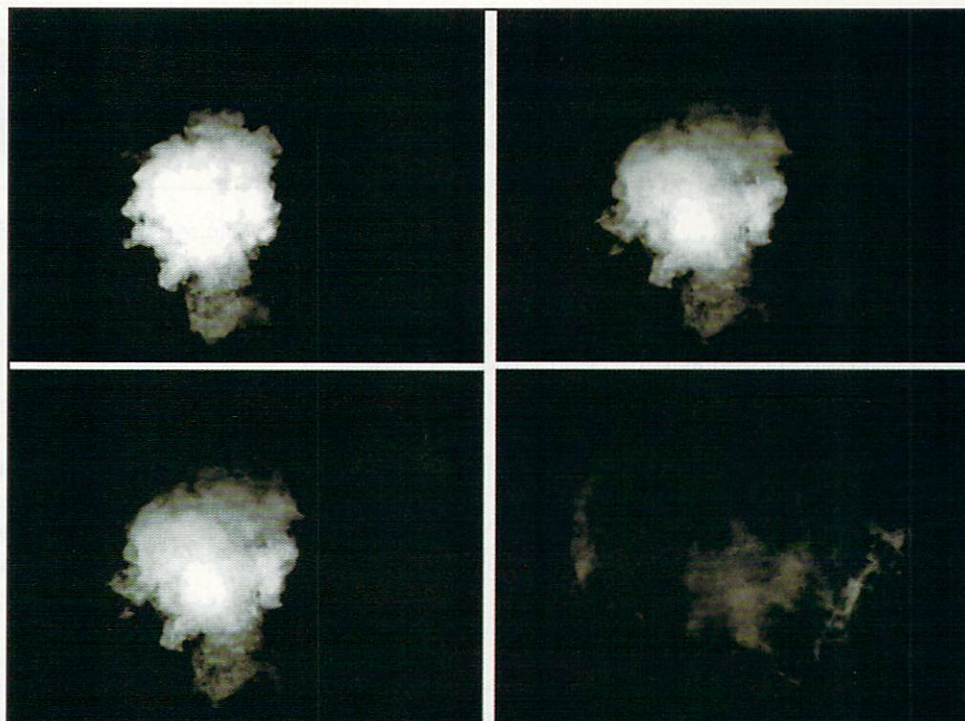
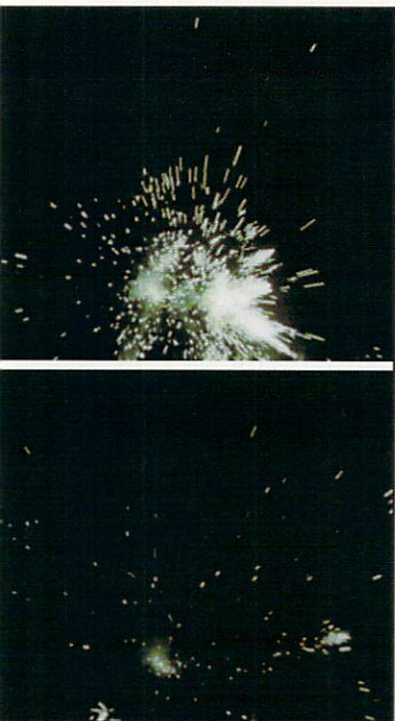


Figure 2 (Above Right): The Sparks footage displays a 3D spark explosion centering on the screen. The sparks fly towards the viewer.

Figure 3 (Above): The Smoke Puffs animation can add a touch of believability when you need smoke to flow from a train or a chimney.

sequences have preview ANIMs as well, so you can load the single files or the animations.

The Fire folder with four Fire types:

Bottomfire (90 frames), Firewipe (88 frames), Fullframe Fire (88 frames), and Pot Fire (76 frames). All of these animation single file sequences have preview ANIMs as well, so you can load the single files or the animations.

The Fireworks folder, with Fireworks (86 frames) and Skyrocket (44 frames). Both of these animation single file sequences have preview ANIMs as well, so you can load the single files or the animations.

The Flyer Clips folder: all of the Pyromania animations as NewTek Video Flyer Clips, ranging from 5 to 12 MB.

The Smoke folder: SmokePuff 1 (218 frames), SmokePuff 2 (120 frames), and a Smoke Video Toaster wipe (166 frames). Both of the Smoke animation single file sequences also have preview ANIMs as well, so you can load the single files or the animations.

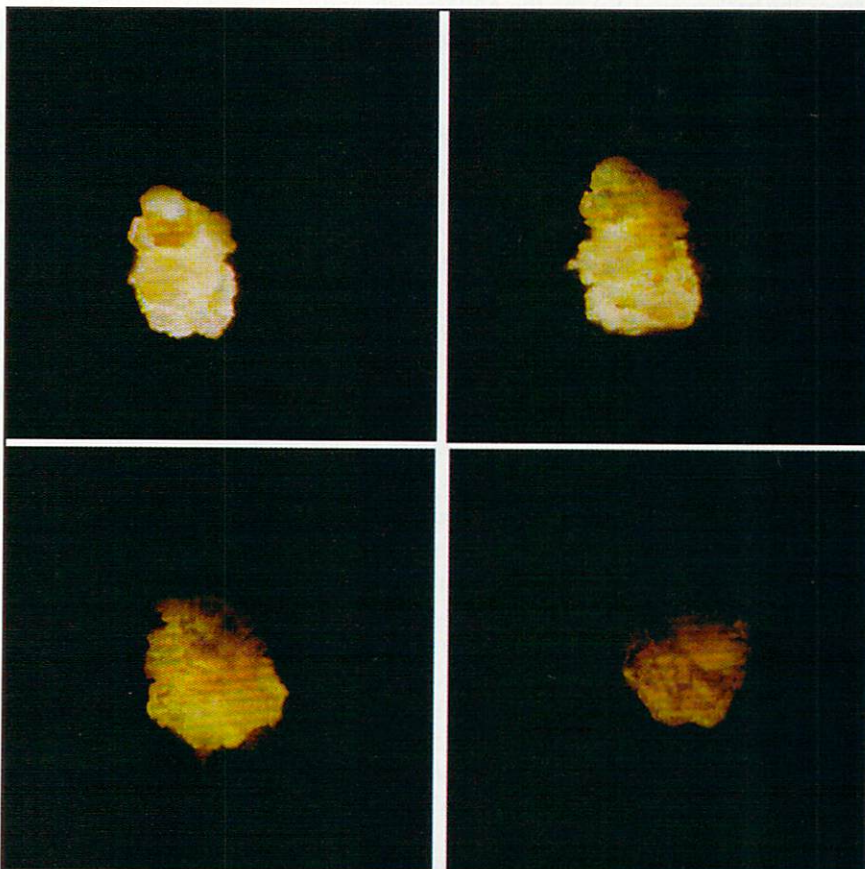


Figure 4. This Fireball is a Pyromania favorite.

Sounds folder: Audio files, in both IFF and WAV formats, to accompany each of the fire and explosion f/x.
A Tutorial folder, for exploring the uses of the Pyromania f/x content.
A Video Toaster folder, with six Overlays (Fireworks, Fiery, Skyrocket, SmokePuff, Spark1, and Sparks 2) and a Toaster Wipe file (Firewipe).

Where and how to use the Pyromania content

There are three central applications that you might want to use in conjunction with the Pyromania f/x content: Brilliance/DPaint, ImageFX, and your 3D software.

Using Pyromania with DPaint or Brilliance

Both of these Amiga applications are 2D art and Animation programs. You can load a text block into your main screen, and then load a Pyromania single file onto the "J" or alternate screen. Blend the two screens, and you wind up with a fire effect image in front of or behind the text. You can also blend one of the Pyromania ANIMs with another selected image so that the fire effect moves behind or in front of your alternate image, just by placing the alternate image on the J screen.

In both DPaint and Brilliance (though I prefer DPaint for this operation) you can load in a Pyromania ANIM, and pick up the effect as an ANIMbrush. This automatically drops the background. Saving the ANIMbrush, and applying it over a text block or other footage, results in a clean animated effect.

Using Pyromania with Nova Design's ImageFX

More than any other ImageFX operation, I prefer using Composite to blend a Pyromania file with another graphic layer. Just load in the alternate image you want to use, and then load in the Pyromania single frame. Place the Pyromania frame in the buffer. Select the blending mode in the Composite window (Add, Subtract, etc.), and the amount of the blend. Select OK, and you have your composited effect.

Using Pyromania with Aladdin4D

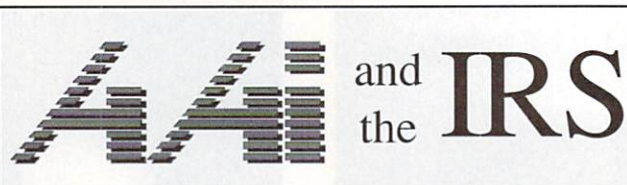
Using your Pyromania single frame animation sequence with Aladdin4D gives you the full Pyromania effect in 3D. Simply do this. Place a flat rectangular plane in the back of some of your other 3D objects. Use Planar mapping to map a selected Pyromania effect to the plane, making sure it drops out the background (Decal). The animation that will be produced will show the Pyromania effect as if it were occurring in 3D space.

Conclusion

Pyromania is well worth obtaining for your Amiga F/X library. With it, you can create fire and explosion effects that are super real.

Visual Concept Entertainment
P.O. Box 921226
Sylmar, CA 91392-1226
<http://www.vce.com/pyro.html>

•AC•



(continued from page 48)

members. All c-7 organizations have a 35% cap on nonmember annual revenue. This means AAi would no longer be free to sell its products to whoever wanted to buy them. If that were not bad enough, as a c-7 we would now be required to keep separate books on member versus nonmember income to prove we are not violating the 35% cap revenue rule. It was interesting that a club member suggested having members buy club products for nonmembers and then have the nonmembers reimburse them to get around this problem. But, the IRS requires c-7s keep track of the original source of revenue - be it member or nonmember income.

Once the IRS grants tax-exempt status to an organization that does not necessarily mean you get it for life. You have to prove that you deserve to keep it. That means more than simply not violating the rules required for the status you were given. It means maintaining the records to back it up. If the IRS decides to audit your club and your club falls short of the requirements, your club not only loses its tax-exempt status, but may be charged severe financial penalties.

So, what is the upside to being a tax-exempt, c-7 organization? You do not have to pay any income tax to the IRS. That's all. The downside to being a c-7, tax-exempt organization is that you have to impose so many restrictions on your club that you could virtually destroy it. I therefore recommend all clubs get incorporated and remain taxable - free to meet and sell your products however you see fit.

There is one other option that some well-established clubs might want to consider - especially if they are interested in having their own "permanent" meeting facility and do not already have one. I personally do not like having to set up and tear down a meeting room just for the privilege of having a club meeting - month after month, year after year. There has got to be a better way.

According to the IRS, the c-3 tax-exempt status is the only status wherein tax-deductibility is allowed. Unfortunately, computer user groups in and of themselves do not qualify as c-3 organizations. (At least, that is what I have been told by the IRS. I have also been told by the president of one Amiga user group that his club is c-3. If so, his club is one of the few and extremely fortunate.)

What a taxable computer user group can do is become the "administrator" of a foundation that provides some kind of valuable community service. What kind of service? Consider becoming the administrator of a multimedia meeting facility. Your club needs a permanent place to

meet. So, you get together with some other community groups and corporations. They have the seed money. Your club has the multimedia and organizational skills. It's a win/win situation. (That does not make it easy. But, it just might make it a worthwhile venture.)

Once the foundation is established, all equipment, services and money donated to the meeting facility is tax-deductible to the contributor. Keep in mind, it is the meeting facility (foundation) which is tax-exempt, not your club. The foundation would require its own checking account. The foundation would have to keep good records of all contributions and therefore it would be a good idea to have an accountant.

What is the upside and downside to this scenario? First, the downside. You need "seed money" to get started. A computer club is not likely to have enough money in its treasury to own or lease a meeting facility. There are going to be other expenses as well - such as security, utilities, phone lines, etc.

Now, the upside. If this foundation is a multimedia meeting facility for the community, it therefore belongs to the community. And, the community should pay the bills. The Amiga club is simply volunteering its expertise in an administrative capacity. Yes, we might write the checks. But, those checks come out of the foundation's bank account, not the computer club's account. And, by the way, that foundation account should be made up of an assortment of corporate and philanthropic financial donations - all of which are tax-deductible.

As the foundation's administrator, the computer club not only pays the bills, but determines who uses the facility and what it looks like inside. To my knowledge, there is not a meeting facility anywhere that showcases Amiga equipment for the general public - let alone Amiga users. But, I think there desperately needs to be such places. And, if we don't have the money to make something like this happen but want it to happen, we need to reach out to those who are best

equipped to help in a way they will want to do so.

Amiga Atlanta has already proven that if you reach out to the community and meet a valuable need, that community will reach back. We did it with the Special Olympics here in Georgia. When IBM stopped participating in the Olympic Town of the Special Olympics Summer Games during Memorial Day Weekend at Emory University, we took over. The

Special Olympics provided everything we needed for a multimedia exhibition - tent, tables, chairs and electrical power. We supplied the Amiga computers and an assortment of peripherals. AAI has only done this for two years. But, already we have proven to be the most popular exhibit in all of Olympic Town.

Next year, the local chapter of the Special Olympics plans to invite representatives from our club to a special reception to receive an award. I have been to this reception as a representative of my employer, Bear Stearns. This reception is a wonderful opportunity to mix and mingle with the heads of major local corporations. Moreover, it is an excellent opportunity to talk about the Amiga computer and the need for a community multimedia center. This is indeed a win/win situation.

News of the Atlanta Amiga community's involvement with The Special Olympics is spreading throughout the Special Olympics organization. So much so, a representative for the Special Olympics has told me he would now like Amiga user groups all over the world to affiliate themselves with Special Olympics chapters as our club has done. (To learn more about the Special Olympics chapter near you, look up the Special Olympics on The Internet.)

There is a website, a book and a series of special libraries throughout

the United States set up to assist c-3 organizations concerning philanthropy. The website address is <http://www.fdncenter.org>. The name of the book is "The Foundation Center's Guide to Proposal Writing" by Jane C. Geever. For the list of Foundation Center Libraries throughout the United States, consult the website listed above.

Finally, if you would like to find out for yourself what the IRS has to

Once the IRS grants tax-exempt status to an organization that does not necessarily mean you get it for life.

offer regarding tax-exempt organizations write:

Internal Revenue Service
EP/EO Division-EO Group 7204
31 Hopkins Plaza - Room 1420
Baltimore, MD 21201

I hope this information is helpful to the Amiga community.

Lamar Morgan, President
Amiga Atlanta, Inc.
P.O. Box 49103
Atlanta, GA 30359-1103 USA
E-mail: lamar@mindspring.com

•AC•

For More Information:

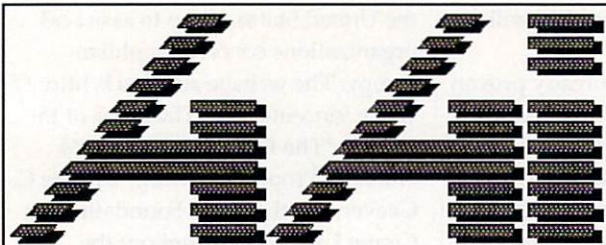


The IRS maintains an intensive web site with a vast amount of information and forms available on-line at:

<http://www.irs.ustreas.gov>.
Our research into Mr. Morgan's article ran a search of the IRS on-line data and yielded 75 articles on c-3 organizations and 14 articles on c-7.

In addition, the IRS publishes an on-line newsletter, Digital Daily, with loads of information for individuals, businesses, and groups. It can be located at: <http://www.irs.ustreas.gov/prod/cover.html>.

•AC•



and the IRS

The trials and errors of creating a non-profit Amiga user group.

by Lamar Morgan

The IRS & Amiga Club Growth in the US

Everybody wants their Amiga user group to grow and prosper. It's an uphill battle, to be sure. And, as my club - Amiga Atlanta, Inc. - found out, sometimes what you think is an opportunity for growth is the exact opposite.

Take the idea of becoming a tax-exempt, nonprofit organization. Seems like a good idea for a computer user group. In AAi's case, the user group exists primarily for the benefit of its members. No one is paid to be an officer. We all volunteer our time and expertise. But, we do sell products - videos, bumper stickers, DOM's, golf shirts, etc.

To reduce our tax responsibility and hence have more money in the club treasury to do more for the club membership, getting tax-exempt status seemed like a good idea. Besides, c-3 nonprofit, tax-exempt organizations are eligible to receive grants from philanthropic organizations. What club would not like to receive a sizable financial donation that was tax-deductible to the contributor.

The whole idea of receiving tax-deductible donations of not just money, but equipment and services seemed too good to ignore. And, as my club would eventually find out, for an ordinary computer user group, it was too good to be true.

What is important for every Amiga club that can afford to establish

itself properly in the community it serves, is that it get incorporated. Club incorporation protects the club officers from lawsuits. Should someone fall and hurt themselves at a club meeting, the officers of the club could be held liable for the damage done—unless the club is incorporated. No one wants to volunteer their time and effort to become a club officer and suddenly discover their club is not only defunct but their life savings are in jeopardy.

AAi sought to reincorporate itself back in 1996. We attempted to do this as a c-6 tax-exempt organization with the help of both legal counsel and accountant advice. We had to completely rewrite our bylaws. That was no easy task. Our attorney put together a new Articles of Incorporation document. Although we did not know it at the time, c-6 status is reserved specifically for business leagues, such as a chamber-of-commerce. It does not apply to computer user groups.

I should have detected a problem when I attended the Gateway Computer Show in St. Louis back in 1997. Charles Meier, the treasurer for The Gateway Computer Club told me his club was incorporated as a c-7 tax-exempt organization. When I returned to Atlanta and asked my club's attorney at the time if AAi should be seeking c-7 status as opposed to c-6, he assured me we should proceed as he had recommended.

Well, as it turned out, the IRS turned down AAi's application as a c-6

organization. According to the Tax-exempt Division of the IRS, the only tax-exempt status a computer user group such as ours could qualify for was a c-7, which was as a "social club".

Since there is more paperwork involved for the IRS in rejecting applicants than approving them, the IRS actually tries to help applicants qualify. So, rather than rejecting our application altogether, the IRS suggested we amend it. Well, if by amending our application all the IRS meant for AAi to do was change a few words, there would not have been any problem. Unfortunately, becoming a c-7 organization meant AAi had to change the way it operated in many ways.

Consider some of the things our club likes to do that would be prohibited as a c-7 organization:

1) Have "open" meetings. AAi has always had meetings that were open to the general public. Under c-7, meetings would only be open to club members. For AAi, this would mean we would have to find another place to meet other than a public library. This also meant it would cost the club more money just to have the kind of meeting we had become accustomed to having. Even our ability to have a party would be restricted. And, we like to "party". Just ask someone who went to our "PowerPicnic" this summer.

2) Make money by selling club products to enhance services to club

(continued on page 46)

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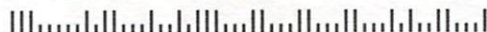
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MODEL	COST FOR BOARD ALONE	COST FOR WHOLE COMPUTER	MODEL	COST FOR BOARD ALONE	COST FOR WHOLE COMPUTER
C64	\$30.00 flat Rate	\$35.00 flat rate	A1200	\$100.00 plus parts	\$130.00 plus parts
A500	\$50.00 plus parts	\$55.00 plus parts	A4000	\$189.00 plus parts	\$199.00 plus parts
A2000	\$110.00 plus parts	\$125.00 plus parts	A4000 Tower	\$189.00 plus parts	\$219.00 plus parts
A3000	\$165.00 plus parts	\$189.00 plus parts	CD32	\$85.00 plus parts	\$95.00 plus parts
A3000 Tower	\$165.00 plus parts	\$199.00 plus parts	CDTV	\$85.00 plus parts	\$95.00 plus parts
A2000,3,4 Keyboard	\$35.00 flat rate				

A3000 Upgrade 16 MHz to 25 MHz - \$79.95

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CYBERSTORM PPC w/200MHz PowerPC 604e, w/o 68k Companion CPU.....	\$765.00
CYBERSTORM PPC w/233MHz PowerPC 604e, w/o 68k Companion CPU.....	\$858.00
BLIZZARD 603e PPC w/160MHz with 68040/25 CPU with SCSI.....	\$464.50
BLIZZARD 603e PPC w/200MHz with 68040/25 CPU with SCSI.....	\$541.00
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BLIZZARD 603e PPC w/240MHz with 68040/50 CPU with SCSI.....	\$962.00

NOTES: Price on any of the above Blizzard PPCs without SCSI deduct \$70.00
-68060/50 CPU available-Call

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Apollo 2030 68030/50 MHz/882/SCSI-2.....	\$209.00
Apollo 3040/4040 68040/40 MHz/SCSI 2, up to 128MB.....	\$334.00
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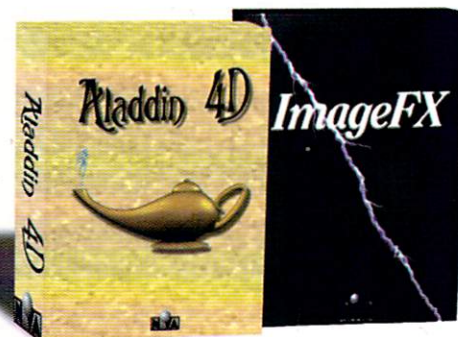
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